DECEMBER, 1958
VOL. I, NO. 8

Problems of Economics

ВОПРОСЫ ЭКОНОМИКИ

English Translation of the U.S.S.R. Monthly Journal VOPROSY EKONOMIKI

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IN THIS ISSUE

Marx on Socialism

Some Questions of Planning Consumption Goods' Prices

The Development of the Chemical Industry -- One of the Most Important Economic and Political Tasks

Some Problems of the Accelerated Development of the Chemical Industry

Methodological Problems of the USSR Financial Balance

On the Profitability of Socialist Enterprises

The Perspectives of Technical Progress

The Coming Revaluation of the Basic Funds

The Bourgeois and Revisionist Theories of a "Mixed Economy"

Some Questions of the Law of Value and Price Formation in the USSR

The Journal of the U.S.S.R. Academy of Sciences, Institute of Economics

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AUTHORIZED TRANSLATOR AND PUBLISHER . . .
INTERNATIONAL ARTS AND SCIENCES PRESS
33 WEST 42nd STREET • NEW YORK 36, N. Y.

Problems of Economics

TABLE OF CONTENTS

VOL. I, NO. 8

DECEMBER, 1958

Note to readers: With the current issue, the time lag between the appearance of Voprosy Ekonomiki and its English translation is reduced to three months (the Russian issue usually appears at the end of the month it is dated). The current issue of Problems of Economics therefore combines the June, July and August issues of Voprosy Ekonomiki. In order to publish this combined issue, it has been necessary to summarize a substantial number of articles (those beginning on page 85). We believe that readers will agree that the procedure in this issue is justified by making it possible to bring the English translation of Voprosy Ekonomiki more up to date.

Page
L. LEONTYEV: Marx on Socialism (June) 5
L. SKVORTSOV: Some Questions of Planning Consumption Goods' Prices (June) 13
V. MEZENTSEV: The Development of the Chemical Industry — One of the Most Important Economic and Political Tasks (June) 18
N. FEDORENKO: Some Problems of the Accelerated Development of the Chemical Industry (July) 24
A. LYANDO: Methodological Problems of the USSR Financial Balance (July) 32
V. TRIFONOV: Problems of the Industrial Development of the Chinese People's Republic During the First Five-Year Plan (July) 38
G. KHROMUSHIN: The Theory of the "Income Revolution" in the US and Contemporary Revisionism (July) 44
Z. ATLAS: On the Profitability of Socialist Enterprises (July) 49
T. KHACHATUROV: The Perspectives of Technical Progress (August) 56
F. PANKRATOV: The Coming Revaluation of the Basic Funds 63
E. BREGEL: The Bourgeois and Revisionist Theories of a "Mixed Economy" (August) 67
A. KULIKOV: Some Questions of the Law of Value and Price Formation in the USSR (August) 74

The Following Articles Are Summarized (See Note to Readers, Above)

JUNE

EDITORIAL: State Interest — at the Center of Attention 85
. ZHEGALIN: The Reorganization of the MTS and Some Questions of the Development of Collective Farms in the Stalingrad Region 85
A. PASHKOV: An Approach to the Law of the Preferential Development of the Means of Production 86
. USATOV: The Role of the Funds of Concerns Should Be Enlarged 86
STEFAN SHARENKOV: The Role of Economic Cooperation and the International Socialist Division of Labor in Building Socialism in the Bulgarian People's Republic 87

DISCUSSIONS AND DELIBERATIONS

M. MAKAROVA: Economic Ties Between Cities and Villages Under New Conditions 87
G. BAKULEV: The Basic Criteria and Indices of the Economic Effectiveness of Capital Investment in Industry 88

CRITICISM AND BIBLIOGRAPHY

G. GRIGORYEV, K. KOSTIN: A Book on the Economic Concepts of West German Social Democrats 89

Page

REVIEWS

V. KURAKIN: Measures for the Improvement of Management in Industry, Finance and Trade in the Chinese People's Republic 89

NOTES AND COMMUNICATIONS

I. KARIUS, L. SCHNEIDERMAN: Economic Indices of a Section in Intra-Factory Cost Control 90

SCIENTIFIC LIFE

A. SMIRNOV, I. YERMAKOV: Questions of Strengthening Cost Control in Industry 90
D. NIKOLAYEV: Discussion of Economic Problems at the Third Union Conference on Construction 91
The New Magazine "Economic Sciences" 92
Scientific Activity of the Economic Institute, the Slovak Academy of Sciences 92

INTERNATIONAL ECONOMIC TIES OF ECONOMISTS

V. DYACHENKO: A Conference on Questions of Peaceful Collaboration and International Understanding 92

JULY

EDITORIAL: A Powerful Economic Stimulus for the Upsurge of Agriculture 93
M. MOISEYEV: A New Stage in the Development of Economic Ties Between Industry and Agriculture 93
N. GALPERIN: An Improvement in Material-Technical Supply and the Struggle Against Sectional Tendencies 93
V. STOLPNIK: The Enlargement and Concentration of Production on State Farms 94
I. DVORKIN: The Class Structure of Contemporary Capitalism in the Reformists' Distorted Mirror 94

CRITICISM AND BIBLIOGRAPHY

A Discussion Concerning Textbooks on Industrial Economics 95
Y. KVASHA: It Is Necessary to Describe How to Calculate Optimal Variants in Textbooks on Industrial Economics 96
M. KOLGANOV: From the History of Russian Economic Thought at the Time of the Abolition of Serfdom 96
Economic Literature of the Rumanian People's Republic in 1957 9

REVIEWS

K. MIKULSKI: The Improvement of Industrial Management in the German Democratic Republic 9

Page

NOTES AND COMMUNICATIONS

. SAFRAI: We Should Use the Possibilities of Lowering the Cost of Repairing Agricultural Machines 98

SCIENTIFIC LIFE

Union Conference on the Problem of the Effectiveness of Capital Investment 98
roblems of the History of the USSR's National Economy and the Principles for Dividing It into Periods 99
Scientific Session on the Study and Generalization of the Experience of the Economic Councils 99
. BRUTUS, A. RAUD: A Conference of Institutions of Higher Learning and the Institute of Economics, Estonian Academy of Science 100
. VEDUTA: The Belorussian Economic Council and the Institute of Economics, Belorussian Academy of Science 100
. GUDOSHNIKOV: Scientific Work of the Chairs of Economics, Voronezh Agricultural Institute 100
. KAZANSKY: The Research Institute of Construction Economics 100

INTERNATIONAL SCIENTIFIC TIES OF ECONOMISTS

he Delegation of French Economists in the USSR 101

AUGUST

. FIGURNOV: The World System of Socialism in a New Upsurge 102
. BOLGOV: The Policy of Strengthening the Alliance of the Working Class and Peasantry and the New Stage in the Development of the Kolkhoz Regime 102
. CHEREPNIN: Questions of Payment for the Work of Machine Operators on the Collective Farms 103
IROSLAV ROSITSKY: Concerning New Forms of Industrial and Construction Management in the Czechoslovakian Republic 103
. MARTYNOVSKAYA: Concerning the Question of Russian Utopian Socialism in the 1840's 104

DISCUSSIONS AND DELIBERATIONS

. BATYREV: Concerning the Necessity and Nature of Commodity Production Under Socialism 104
. VENZHER: Commodity Production Under Socialism and the Agricultural Artel 105

CRITICISM AND BILIOGRAPHY

. CHERNOMORDIK: Problems of Cost in Transportation 106
. GNEDIN: The Legend of the Free Market Economy 106
ew Economic Literature 107

SCIENTIFIC LIFE

. GRADOV: In the Economic Institute, the Ukrainian Academy of Science 107
. PERSITS: Economic Research in the Field of Subsidiary Chemistry 107
Scientific Conference on How to Determine the Economic Effectiveness of Agricultural Production 108

PROBLEMS OF ECONOMICS

English Translation of the U.S.S.R. Journal Voprosy Ekonomiki

EDITOR AND PUBLISHER: MYRON E. SHARPE

Problems of Economics is the English language translation of *Voprosy Ekonomiki,* journal of the Institute of Economics, U.S.S.R. Academy of Sciences. The translation is authorized by arrangement with Mezhdunarodnaya Kniga, Moscow.

Problems of Economics is a complete, literal translation, without editorial comment, of *Voprosy Ekonomiki.*

Twelve issues per year. Subscription rate: $50.00 per year (twelve issues); $4.50 per copy. $20 per year to persons associated with institutions already subscribing.

Editorial Collegium of the U.S.S.R. Journal *Voprosy Ekonomiki:*

L. M. Gatovsky (Chief Editor), P. A. Galubkov, N. N. Dyakonov, V. P. Dyachenko, A. E. Yezhov, V. A. Zhamin, A. G. Kulikov, A. N. Lavrishchev, A. P. Liapin, M. E. Moiseyev, G. A. Prudensky, T. S. Khachaturov. Technical Editor: O. Shvova.

Editorial Office: Volkhonka 14, Moscow, U.S.S.R.

The names of the editors and the editorial address of *Voprosy Ekonomiki* are given as a matter of information. The editors of *Voprosy Ekonomiki* have no connection with the translation and publication of the journal in English.

INTERNATIONAL ARTS AND SCIENCES PRESS
33 West 42nd Street, New York 36, N. Y.

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L. Leontyev:

Marx on Socialism

All Marx' titanic work and all his thought were directed toward providing a scientific basis for the historical necessity of the proletarian revolution and the socialist transformation of society. Marx deduced the inevitability of the change to socialism entirely from the economic law of movement of capitalism and from an analysis of contradictions inherent in capitalism. For just this reason he considered that it was completely unnecessary to write all sorts of formulas for the new society which had so much attraction for the representatives of pre-Marxist social systems.

The founders of Marxism often emphasized that the specific course of the socialist revolution and the specific methods of the socialist transformation of society would depend to a great degree on the situation in which the proletariat would defeat the bourgeoisie. When people asked Marx and Engels to paint a picture of future socialist society they always received a refusal for an answer. Marx and Engels thought that if they kept to scientific grounds, they could only say what the socialist transformation of society would begin with and what direction it would take. Marx did not at all want to "link hands" with future figures in socialist revolutions, wisely considering that they would be able to take up creatively and develop further the basic principles of scientific socialism according to the specific situation.

In applying dialectical materialism to the study of the capitalist means of production, Marx proved with iron logic that this means of production was doomed as a result of the conflicts between production forces and production relations.

"Since the labor process is only a process between man and nature," wrote Marx in Capital, "its simple elements remain the same for all forms of social development. But each specific historical form of this process develops its material bases and social forms further. When it has reached a certain stage of maturity, a given historical form is thrown off and clears a place for a higher form."(1)

Capitalism developed the productive forces in society to a level so high that it would have been unthinkable under any preceeding system. But the production relations in capitalism, which, for a certain time, served as the form of development of productive forces later inevitably became fetters for the latter. In order that society be able to move forward, it was necessary to break these fetters. They were broken by the socialist revolution of the proletariat, which is carrying out the radical transformation of social relations and is leading to the victory of the new socialist system. Socialism liberates the productive forces and opens a broad prospect for further development of them.

The enemies of socialism, specifically the modern revisionists of all sorts, attempt to discredit the immortal theory of scientific communism and allege that it has "aged" and that it is "not confirmed" by the facts. But what are these fabrications worth in the light of the undoubted fact that the scientific prediction of Marx about the inevitability of the victory of the socialist revolution as a result of the irreconcilable conflict between the productive forces and the productive relations of capitalism has been born out in the most striking way? At the present time, about one-third of humanity has been liberated from the fetters of capitalism and is moving along the path toward the successful construction of socialism and communism. The great rightness of Marxism-Leninism is so obvious that any attempt to deny it testifies to a truly limitless contempt for the facts.

Marx did not only provide the scientific basis for the inevitability of revolutionary change from capitalism to communism but he brilliantly revealed the essence of the socialist revolution, its basic content and its main tasks.

Marx considered the socialist revolution as a great leap forward in the history of human society. The elements of this leap were forming during the course of development of capitalism but without the revolutionary overthrow these elements could not change anything in the capitalist system. The change from capitalism to socialism could not be brought about by unnoticable, gradual changes. Marx decisively refuted the petty illusion of "the growth of capitalism into socialism," which, in our day is being spread about by reformists and revisionists.

Marx showed that the productive relations under capitalism are the last antagonistic form of the social process of production and that the capitalist system is the last stage of the pre-history of human society. Engels called the socialist revolution humanity's leap "from the realm of necessity into the realm of freedom," for only under socialism did people first begin to apply the laws of social development.

Marx revealed the laws of the class struggle in capitalist society and established that this struggle "inevitably leads to dictatorship."(2)

"Between capitalist and communist societies," Marx wrote, "lies a period of revolutionary transformation of the first into the second. To this period corresponds a period of political transformation and the state during this period can be nothing other than the revolutionary dictatorship of the proletariat."(3)

When Lenin unmasked the opportunists of the Second International he emphasized that the teaching about the dictatorship of the proletariat is the main thing in Marxism. A Marxist is only he who carries the teaching on the class struggle to the point of recognition of the necessity for the dictatorship of the proletariat.

Lenin brilliantly developed Marx' teaching about the socialist revolution and the dictatorship of the proletariat and enriched it with an analysis of the changing conditions of the class struggle in the new epoch — the epoch of imperialism — when the course of history placed the task of seizing power directly before the working class. The Leninist theory of the socialist revolution was a very great achievement of creative Marxism.

During the period of revolutionary storms after the First World War, the opportunists and revisionists replaced the slogan of the dictatorship of the proletariat with the slogan of coalitionist bourgeois-right socialist government as a means toward a "democratic" shift to socialism. The coalition governments, in which the social-democrats aided the reactionary bourgeoisie in suppressing the revolutionary actions of the working class, cleared the path in Germany for fascism rather than socialism. Such is the impartial judgment of history on the traitorous theory and practice of reformism. The present liquidators of Marxism and the revisionists are attempting to resurrect the attacks made by the Kautskyites and opportunists during the 1920's against the principle of the dictatorship of the proletariat. It suffices to recall the recent past to understand where these attacks are leading and where the line of revisionism is leading.

Marx constantly unmasked the petty bourgeois illusions about "pure, classless" democracy. He lashed mercilessly at the hypocrisy and pharisaism of the bourgeoisie who concealed their desire to rule under the shield of a democratic state that was "above class."

In dealing with the question of "pure" democracy and its future role, Engels wrote to Bebel in 1884 that at the time of the revolution it would turn out to be "the last anchor of the salvation of the bourgeois and even the feudal society," for "hidden behind its back will be the entire reactionary mass, which will strengthen it. Everything that was reactionary will then don a democratic mask."(4)

The course of history has fully born out this estimate of "pure democracy" that was given by the great teachers of the working class. And when the modern revisionists again drag the banner of "pure democracy" from the dustbin of history all covered with dirt and blood, they reveal themselves as the servants of the blackest reaction. Indeed, it was this united reaction grouped around "pure democracy" that unleashed the civil war and the foreign intervention against the world's first workers' and peasants' state. The quite recent example of the counterrevolutionary mutiny in Hungary, in which Imre Nagy opened the gates to the Horthyist-Fascist pogrom organizers under the slogan of "pure democracy," once again showed the true content of this slogan.

Marx taught that for a successful fight for socialism, the working class needs an independent political party. Following the teachings of Marx, Lenin worked out the theory of the Marxist party of the working class and revealed the role of this party both in the struggle for state power and after the establishment of the dictatorship of the proletariat, and in the period of the construction of the new society. Marxist-Leninist principles of the formation and activities of Communist parties withstood the most difficult tests of time. "In modern times, various forms of socialist states have arisen," said Comrade N. S. Khrushchev in a report to the anniversary session of the USSR Supreme Soviet on Nov. 6, 1957. "In addition it should be emphasized that without a Marxist-Leninist Party the existence of the socialist state is impossible. It is impossible to organize the working class as the leading force in society; it is impossible to secure the unbreakable union of the working class and the peasantry and it is impossible to successfully accomplish the tasks of building socialist society."

In repudiating the Marxist teaching on the dictatorship of the proletariat, the revisionists are taking the stand of liquidators and where the question of the Party of the working class is concerned, they act against the principle of democratic centralism, which is at the basis of its activities. This position only adds to the nature of revisionism as renegadism, as the main danger to the international workers' and communist movement in modern times.

In providing a basis for the necessity for the dictatorship of the proletariat as the single road to socialism Marx also noted the main trends in the work of the proletarian state in the socialist transformation of society.

In communism's first plan document — The Communist Manifesto — Marx and Engels pointed out that the proletariat uses the power they have won to seize all the bourgeoisie's capital step by step, to centralize all the means of production in the hands of the state and to increase the productive forces of society as quickly as possible. The steps taken in doing this, it says in the Manifesto, will of course be different in different countries. At the same time the Manifesto points out a number of measures which can be used almost universally in the most developed countries.(5) The measures enumerated in the Manifesto naturally bear the stamp of the times when the The Communist Manifesto was written. But the fact that the overwhelming majority of the measures indicated have been carried out in the Soviet Union and other socialist countrie during the first period of the construction of socialism is that much greater a testimony to the force and vitality of Marxist ideas.

Marx provided a profound theoretical basis for the necessity for the "expropriation of the expropriators," i.e., the socialist collectivization of the means of production, which after the victory of the proletarian revolution, cease to be capitalist property and become the property of all society. The demand for the "expropriation of the expropriators" became one of the basic points in the maximum programs of socialist parties. It was only later, as a result of the degeneration of the opportunistic leaders of the socialist parties, that this demand was taken out of their programs and replaced with all sorts of vague formulas which really meant a rejection of the revolutionary transformation of capitalist society into a socialist one.

Marx emphasized the special importance of enlisting the peasantry on the side of the proletariat. In analyzing the lessons of the 1848 revolution, he wrote to Engels: "In Germany the whole cause will depend on the possibility of supporting the proletarian revolution with a second edition of the civil war."(6)

In developing Marxism creatively, Lenin worked on the problem of a union of the peasantry with the working class from all sides and showed that this union is the indestruct principle of the dictatorship of the proletariat. The Comm nist Party of the Soviet Union has secured the victory of socialism on the basis of an unshakable union of peasants and workers and is leading our people forward toward the successful construction of communism. The Marxist-Leninist Parties in the people's democracies are leading in the construction of socialist society and are strengthen the union of the working class with the peasantry in every way.

Marx foresaw the complexity of the problems involved enlisting the peasant masses in the construction of a socia ist economy. The following statement by Engels, made aft Marx' death, is of great importance: "Marx and I never h any doubt," Engels wrote to Bebel in 1886, "that during th shift to the communist economy we would have to use cooperative production on a broad scale, as an intermediate link."(7)

Marx' and Engels' ideas about using cooperative produc during the socialist transformation of society turned out t be fruitful in the highest degree. The cooperative plan cr ated by Lenin for the enlistment of the broad masses of th peasants in socialism found realization in the collectiviza tion of agriculture which secured a complete victory for socialism in the countryside. At the present time, the experience of great China and the experience of other socialist countries of Europe and Asia as well as the historical experience of the USSR confirm that the natural and correct path toward the gradual socialist transformation of agriculture is in carrying out the Leninist cooperative plan to be applied while taking into account the specific features and conditions of each country.

Marx provided the basis for the international nature of the liberation struggle of the working class. In the Communist Manifesto it was emphasized that in the struggle of the proletarians of various nations, the communists "share and defend universal interests of the proletariat that do not depend on nationality."(8) In the international solidarity of the working class, Marx saw the source of the power and invincibility of the revolutionary working class movement. He lashed angrily at the retreat from internationalism committed by the compilers of the Gotha program of the German Social-Democratic Party. Engels thought that one of the basic flaws in the draft of the Gotha program was the fact that in it "the principle of the international nature of the working class movement is to all practical purposes cast aside for modern times," and demanded a clear statement in the program that the German labor party "would recognize its solidarity with the workers of all countries and that it be ready in the future, as it had in the past, to fulfill the obligations following from this solidarity."(9)

The founders of scientific communism emphasized the opposition of real proletarian internationalism not only to the preachings of national limitations but also to the vague phrases about the "international brotherhood of peoples" which do not obligate anyone to anything and are quite acceptable to the liberal bourgeoisie. After Engels' death the German social-democrats sank rapidly into opportunistic degeneration and when the first shots of the 1914-1918 world imperialist war were fired the majority of the leaders of the parties in the Second International betrayed the cause of socialism, retreated from internationalism and adopted positions of social chauvinism. Only the Leninist Party of Bolsheviks defended revolutionary Marxism, remained true to the principle of proletarian internationalism and fulfilled the obligations following from it to the end. One of the most important principles of the policy of the Soviet state from the very first days of its existence was the firm union of the working people of the USSR with the working class and the oppressed masses in all countries.

"Soviet power, which has staunchly fulfilled all obligations to the solidarity of the workers of all countries in their struggle for socialism and against the capitalist yoke," wrote Lenin, "will continue to do everything within its power to cooperate with the international socialist movement and to secure and speed the path leading humanity to freedom from the yoke of capital, from hired slavery and to the formation of a socialist society and a firm, just peace between the peoples."(10)

In our time the principle of proletarian internationalism is the basis of the unity of the world socialist system and the source of the power and might of the unshakable camp of socialist countries. The Marxist-Leninist Parties educate the masses of the people in the spirit of proletarian internationalism. They condemn and unmask the traitorous slogan of "national communism."

In their decisive struggle against revisionism and dogmatism, the Communist Parties creatively apply the Marxist-Leninist teaching about the socialist transformation of society and enrich it with new experience. An outstanding example of the creative development of Marxism are the historic decisions of the 20th Party Congress. The declaration of the November, 1957 Conference of Representatives of Socialist and Workers' Parties of Socialist Countries, held in Moscow, which draws generalizations from the experience in the international workers' movement in the postwar period, is a major contribution to the treasure house of Marxism-Leninism. The statements in the declaration on the main laws of socialist revolution and socialist construction, which apply to all countries entering on the path to socialism and on the recognition of the national features in different countries are a clear demonstration of the force and vitality in the ideas of Marxism-Leninism.

***

Marx' statements on the specific problems of socialist society are not very numerous and most of them were made in passing. In some cases they were evoked because of the need to resist incorrect notions about socialist society, the famous remarks about the draft of the Gotha program, for example. The majority of the remarks about socialist economy in Marx' works, and especially those in Capital, are of another origin.

Marx irrefutably proved the historical nature of the capitalist mode of production, its production relations and economic categories and the laws that operated under it. In a number of cases he has recourse to a comparison of capitalism with the scientifically founded postulates about socialist society — "a society of associated producers" — which he considers to be in direct contrast with capitalism and as the dialectical denial of capitalism. Of course the theoretical and, above all, the methodological value of these statements by Marx is enormous.

An example is the analysis Marx gives of the festishism of goods and its secrets. Marx not only revealed the movement of things — goods within the relationships of people in society — but also showed why, in bourgeois society, these relationships operate in the form of the relations and properties of things. Marx pointed out that all the mysticism of the commercial world slowly disappears when we move to another form of production.

Marx clarifies this thought by turning, on the one hand, to precapitalist forms of production, and on the other hand, by turning to socialist society. First he leads the reader to Robinson Crusoe's island and shows that in this case there is no basis for exchange, value or the fetishism of goods. Then Marx invites the reader to transport himself into the "dark European Middle Ages," into the epoch of the personal dependence of workers and the rule of the natural economy. Here, too, there is no need to dress people's social relationships in the vestments of the relations of things. After this Marx considers the structure of the patriarchal peasant family, in which the labor of all the members is spread directly within the limits of the family. In this case there is no place for private exchange and, consequently, there is no place for the fetishism of goods either.

Finally, Marx goes on to socialist society. He proposes that the reader imagine a union of free people who are working with the aid of common means of production and are expending their own individual labor force according to plan as one labor force. The entire product of the labor of the union of free people is a public product. "The social relations of the people to their work and to the products of their labor are clear both in production and in distribution."(11)

Other remarks about socialist society to be found in Capital and in some of Marx' other works are in the same vein. In characterizing socialism, Marx always takes as his point of departure the fact that this system, under which the means of production are socialized, the exploitation of man by man has been eliminated, and the anarchy of production has been replaced by planned organization on the scale of the society as a whole, there is scope for a rapid increase in productive forces and in man's harmonious development.

Marx considers socialism as the first and lowest phase of communism. Its main task is the rapid development of the productive forces to secure an abundance of products and also the creation of other necessary bases for the transfer to the higher phase of communism.

What meaning do Marx's remarks about the socialist mode of production have for modern times? Marx had no information about the practice of building socialism at his disposal. At the same time Marxism teaches that man's knowledge is firmly bound up with practice. This applies not only to the knowledge of laws of the development of nature but also to the laws of social development. Only in the process of the practical construction of socialism does society gain a more and more profound knowledge of the economic laws of the socialist mode of production, master them more and more successfully and perfect the means of using them.

However, this does not in the slightest degree reduce the importance of the teachings of the Marxist classics dealing with the fields of the political economy of socialism. Indeed, these remarks were the result of drawing generalizations from the practical experience of history and the experience of the working-class movement. These remarks give a reliable guide for the Marxist analysis of the more important aspects of the socialist economy on the basis of a very rich practical experience built up over 40 years in the Soviet Union and over a number of years in other socialist countries.

It is known that no one so emphatically emphasized the need for a creative approach to the immortal Marxist teaching as did Lenin. He laughed out of court those bookworms and doctrinaire persons who thought that one might find prepared answers in Marx and Engels for all of the problems of the gradually changing historical situation and thought it possible to solve new problems with the aid of quotations from the works by the founders of Marxism. At the same time, as the people to who were close to him bear witness, Lenin had the habit of "taking advice" from Marx and Engels in all difficult times in the political struggle. At the most decisive turning points, he turned to the works of the founders of Marxism again and again. Not, of course, to find prepared answers in them but in order to apply Marxism's teachings creatively to a situation, using the important basic postulates in Marx' and Engels' works.

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In all Marx's statements on socialism, the basis of the qualitative superiority of socialism over capitalism runs like a red thread. Marx found the basis for these advantages in the fact that for the first time in human history socialism was creating the necessary conditions for the use of all labor and material resources in the interests of society.

Marx showed that the revolutionary change from capitalism to socialism was a change from a system of production whose aim it was to extract profit to a system of production with the aim of satisfying the continually growing demands of all society.

"In bourgeois society human labor is only a means for increasing accumulated labor. In communist society accumulated labor is merely a means for expanding, enriching and making easier the living process of the workers,"(12) the founders of Marxism wrote in The Communist Manifesto.

As a result of the change from capitalism to socialism the anarchy in social production gives way to the planned development of the economy. In the same way that capitalism is unthinkable without anarchy, chaos and uneven development of production, so socialism is unthinkable without planning, organization and an even development of the society's entire economy as a whole.

The change in the aims of production, the conversion from anarchic production with the aim of extracting profit to the planned development of the economy with the aim of satisfying social needs present the opportunity and also postulate the need to achieve an economy of labor — both living and accumulated — that is unthinkable under capitalism.

In one of the preparatory manuscripts of Capital writte in 1857-1858, Marx emphasizes that under socialism the economy of a worker's time will be of extremely great importance. A socialist society must distribute its workers' time expediently in order to assure production that corresponds to its needs. "Therefore, the economy of time just like the planned distribution of workers' time among the various branches of production," wrote Marx, "remains the first economic law at the basis of collective productio This is a law even to a much greater extent."(13)

Why did Marx attach such great importance to the economy of the workers' time and to its planned distribution? Some remarks in Capital answer this question.

In Vol. III of Capital Marx characterizes the labor process as the process of man's struggle against nature and writes: "Freedom can be achieved in this realm only when socialized man and associated producers rationally regulate their exchange of substance with nature and put i under their joint control instead of allowing it to rule ove them like a blind force. They do this with the least expen ture of force and under conditions most worthy of and adequate to their human nature. But the rule of necessity remains nevertheless. Then begins the development of man power, which is a goal in itself, the true rule of freedom, which, however, can flourish only with the rule of necessi as its foundation. The shortening of the working day is a necessary condition."(14)

A remark made by Marx in Capital in summing up an analysis of the production of absolute and relative surplu value is very important to the understanding of the main meaning of the economy of working time in socialist socie Here again Marx looks into the future. He writes:

"From the social point of view, labor productivity also increases with its economy. The latter includes not only the means of production, but also the elimination of all us less work. Although the capitalist mode of production for economy in each individual enterprise, its anarchical sys of competition nevertheless gives rise to immeasurable squandering of the social means of production and manpo and also to a great many functions which have not yet bee eliminated but which are essentially superfluous."(15)

These words of Marx fully explain why he attaches suc great importance to the economy of working time as a highly important advantage of socialism. The representa tives of the bourgeois classical school, who look upon ca talism as an eternal, natural order of economic life, have emphasized especially that this system corresponds to some alleged drive, laid down by human nature itself, to achieve the greatest result with the least expenditure of labor. Marx exposed the predatory nature of the anarchi system of capitalist competition and showed that the immeasurable squandering of labor, both past and living, is inevitable under the capitalist mode of production. Marx studies the reasons for and the forms of capitalist squan ing from all sides and contrasts them with the wise economy of means in socialist society.

In a number of remarks made in passing in the course of a study of the circular movement of production capital (Capital, Vol. II) and in a study of capitalist production e penses (Vol. III) Marx emphasized the exceptionally important role of public accounting in the socialist economy and points to the enormous opportunities for the rational use of raw materials and production wastes, care of machines and equipment, the acceleration of the production process and the elimination of interruptions in the work process etc.

Under capitalism, the labor force formed into a combine of social proportions opposes the worker as a force foreign to him. All the fruits of technical progress and the economy of material resources become an additional means for intensifying the exploitation of the workers. Only after the revolutionary destruction of the capitalist system can all the opportunities for the economy of society's material resources that are included in the great production machine be realized.

Marx proved that the enormous losses in man and machine labor and the gigantic squandering of productive forces natural to capitalism can only be eliminated under socialism. It follows from this that under socialism the degree of wealth achieved by society and the degree of freedom Marx wrote about will depend on the use of all the potentialities of labor economy in the broadest sense of the word. This is why the economy of working time is a highly important objective necessity in socialist society.

Marx's postulate about the economy of labor in socialist society was further developed in V. I. Lenin's works. Lenin emphasized that, in the last analysis, labor productivity is the main and most important thing for the victory of the new social order. Capitalism created labor productivity unknown under the feudal system. Socialism creates higher labor productivity in comparison with that of capitalism through a strengthening of society's productive forces, which were formerly bound by the chains of the exploitation system, and through a creative upsurge in the initiative of the masses of the working people.

All the history of capitalism bears out Marx' words about the fact that for capital "the law of rising labor productivity does not have an absolute meaning."(16) Only under socialism does continuously rising labor productivity become an absolute economic law.

The experience of the Soviet Union, which has laid down the high-road to socialism, and later, the experience of all other countries following the socialist path, have shown that the socialist system creates unlimited opportunities for an increase in the productivity of social labor on the basis of the planned conduct of the national economy and the liquidation of the senseless squandering and mismanagement of the capitalist economy.

An increase in labor productivity is also an increase in the productive forces of society. The development of productive forces finds its broadest expression in the reduction of the total amount of labor expenditures for the production of a unit of production. At the same time there is a relative increase in the proportion of past labor, embodied in the means of production, and a consequent decrease in the proportion of living labor. This means that the development of productive forces is unthinkable without an increase in the production of the means of production, in heavy industry above all. A more rapid development of the production of the means of production has become an unshakable principle of economic construction in all countries following the socialist path of development.

During the very first months of Soviet rule, Lenin pointed out that its main task was the positive or creative job of establishing an extremely complex network of new relationships encompassing the planned production and distribution of products necessary for the existence of tens of millions of people. "Carry out strict and universal accounting and supervision of production and distribution of products, increase labor productivity and carry out true socialization of production"(17) — this is how Lenin formulated the most important tasks in the construction of a socialist economy.

The principle of labor economy, to which Marx attached such importance, was developed further in these Leninist directives. Leninist ideas were the basis of the methods for the socialist management of the economy developed by the Communist Party of the Soviet Union, which were a priceless contribution to the treasure house of the experience of socialist construction. "Manage economically," the slogan raised by Lenin as early as 1918, is the key to the successful development of the socialist economy at all stages. The realization of the gigantic potentials for the increase in labor productivity hidden within the socialist economic system are of decisive importance for the victory of socialism in the world economic competition with capitalism. The transformation of these potentials into reality presupposes systematic improvement of the methods of economic management, the elimination of unnecessary expenditures, the achievement of the greatest results for the least expenditures, the realization of the advantages of the planned conduct of the economy and the conscious application of the law of value.

Following from the growing demands for the further development of our socialist economy, the Party and the government have taken a whole series of measures in recent years to improve the management of the national economy. Last year a radical reorganization of the management in industry and construction was carried out on the basis of the further development of the Leninist principles of democratic centralism. The reorganization of the machine-tractor stations was carried out this year in order to make the fullest possible use of the potential of the collective farm system, to achieve further rapid growth in the output of agricultural products and to reduce expenditures of labor and materials per production unit. The measures taken by the Party and the government will assure further development of the creative initiative and energy of the masses of working people — the main and decisive source of a rapid upsurge and flowering of the socialist economy.

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In dealing with the distinctive features of labor under socialism, Marx also touches on the question of necessary and surplus labor. In Vol. I of Capital the following remark is devoted to this question: "The elimination of the capitalist form of production will make it possible to limit the working day to necessary labor. However, when this happens necessary labor must be expanded in scope, all other things being equal. On the one hand the conditions of the worker's life will become richer and his demands from life will grow. On the other hand it will be necessary to include under necessary labor part of that which is now considered surplus, i.e., that labor which is required to form a social reserve and the accumulation of stocks."(18)

Marx also poses the same question — that of necessary and surplus labor after the liquidation of capitalism — in Vol. III of Capital. There is the following remark on this subject: "Surplus labor in general, considered as labor above the measure of a given demand, will always exist. But under the capitalist as under the slave system and others, it only has an antagonistic form and results in a complete inactivity of a certain part of society."(19)

If approached superficially, it might seem that there is a contradiction between these two assumptions of Marx (let us remember that the manuscripts of Vol. III of Capital are dated 1865 and the final edition of the first volume was completed by Marx in 1867). Apparently this is the reason why one or the other of these statements appeared in our propaganda literature, depending on the circumstances, but they never appeared together. But on a more attentive reading of Capital it is not difficult to discover that there can be no thought of any real contradiction.

In this connection it is useful to remember a remark of Engels made not long before his death. In the foreword to Vol. III of Capital he gave special emphasis to the fact that a great deal of the confusion about various aspects of Marx's teachings stems from the mistaken notion that Marx is giving a definition when he is actually only developing a thought and from the failure to understand that Marx had no definitions that were to be considered suitable once and for all. In Engels' words this explains the fact that when one considers things and the relations between them not as fixed but in the process of change, their reflections in thought and concept are also subject to change and transformation. They cannot be crammed into limited definitions, but rather they must be developed in their historical and also their logical process of formation.

In Capital we do not find individual definitions and formulas, but a number of analyses of reality, precise in the highest degree, which communicate the greatest subtleties and the finest distinctions.

This is the situation with the problem of necessary and surplus labor. In both cases mentioned above, Marx is developing his thought by using various expressions.

Marx showed that under socialism, objective necessity is not only labor for the direct satisfaction of the needs of the members of society (necessary labor in the narrower sense of the term) but also the labor required to satisfy social needs as a whole, for the creation of emergency reserves and for expanded reproduction (surplus labor). Marx deals with this question especially extensively in The Critique of the Gotha Program, written in 1875.

The shorter the time needed for material production, the greater the time remaining for intellectual and social activities. Under socialism the possibility of shortening the working day, and consequently, of increasing free time is conditioned first of all by the principle of the universality of labor, i.e., the liquidation of the situation in which the free time of one class is created by the transformation of the entire lives of the masses of the working people into working time. Further, the opportunity to shorten the working day is related to an increase in social labor productivity or, which is the same thing, with labor economy on the scale of the entire society.

In speaking of necessary and surplus labor under socialism, Marx emphasized that in this case the production and application of surplus value would be eliminated. In socialist society the surplus product does not go into the pockets of the owners but to all the working people. This means that under socialism, surplus labor is free from that antagonistic nature that it has under any exploitation system. Under socialism, both necessary and surplus labor are labor for oneself and for all society. In the light of this undeniable fact it is clear how far the modern revisionists have fallen in repeating the foul bourgeois slander about the presence of antagonistic classes in socialist society.

The founders of Marxism foresaw that under socialism "the means to live, to amuse oneself, improve oneself and make use of all physical and spiritual capabilities with growing fullness will be put at the disposal of all, thanks to the planned use and further development of the enormous existing productive forces of all members of society with an equal obligation to labor imposed on all."(20)

Marx and Engels said that the universality of labor and an equal obligation on all to labor is one of the main distinguishing features of socialist labor organization. Socialism realizes the formula: "he who does not work, neit shall he eat," which embodies the innermost dreams of ma generations of working people, their dreams of a system f from exploitation of man by man. This formula was includ in the constitution of the first socialist state in the history of mankind.

The universality of labor is one of the most important advantages of socialism over capitalism. In presocialist systems the exploiting classes put working time on the shoulders of the exploited classes. In capitalist countries the enormous labor of the workers in production is combined with the presence of a reserve army of unemployed and a continuously growing section of the population employed in nonproductive labor. The socialist economy is not only based on an equal obligation to labor for all but also creates an opportunity for the fullest and most rational use of the able-bodied population in the field of material production. This opens up completely new prospects for shortening the working day, to which the experien in the building of socialism in the USSR and the people's democracies bear witness. One of the first acts of Soviet pow was the introduction of the eight-hour working day. During th Sixth Five-Year Plan, our country is converting to the seven- and six-hour working day without any reduction in wages.

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In studying the process of capitalist reproduction, Marx touches on the question of the reproduction of the social product after the elimination of the capitalist mode of production in the "society of associated producers." He turns to this problem in Vol. I, chapter 1 of Capital in the section on commercial fetishism. Pointing out that under socialism the entire product of the labor of a union of free people will represent a social product, Marx writes: "Part of this product will serve one again in the form of the means of production. It will remain social. But the other part will be used as the means to life of the members of the union. Therefore it must be distributed among them."(21)

Marx notes that the means of this distribution will chang according to the nature of the social production organism itself and according to the degree of historical development of the producers. If one assumes that each producer share of the means of living will be determined by his working time, working time will play a dual role under these conditions. "Its planned social distribution establishes the most suitable relationship between the various laboring functions and the various demands. On the other hand, working time will also serve as a measure of the individual participation of the producers in the total labor and, consequently, of the part demanded by the individual of the entire product."(22) It is not difficult to see that here a already laid forth that characteristic of the distribution relationships in socialist society, which is developed in the famo postulates of The Critique of the Gotha Program.

In The Critique of the Gotha Program there is, first of all, a profound account of the basis for dividing the entire social product of socialist society into various funds. Par of the gross product of socialist society is used to compensate for the consumption of the means of production. From the remaining part of the gross product (i.e., from the national income) are taken funds necessary for expanded reproduction, for the creation of reserve or emer gency stocks, funds to cover general expenditures of man agement, funds for the joint satisfaction of needs (schools public health, etc.) and funds for the disabled, etc. Only that part of the national income remaining after all social needs have been satisfied can be put at the disposal of individual workers. In criticizing the principle of "uncut labor income" propounded by the Gotha Program — simply a rephrasing of the utopian slogan "right to the full labor product" — Marx shows that on closer analysis the "uncut labor income" slowly becomes "cut" and as he does so he makes the extremely important remark that all that the producer retains, either directly as an individual or indirectly, benefits him as a member of society.

With the first stage of communism, i.e., socialist society, in mind, Marx emphasizes that under this system each individual producer will get back from society, at all accounts, exactly as much as he gives to it. "Obviously the very same principle operates here as that which regulates the exchange of goods, since the latter is the exchange of equal values," writes Marx. "The form and content have changed in this case, because under changed circumstances no one can give anything besides his labor and, on the other hand, because nothing can become the property of individuals but individual objects of consumption. But as far as the distribution of the latter between producers is concerned, the same principle rules as in the exchange of commercial equivalents: a certain quantity of labor in one form is exchanged for an equal quantity of labor in another."(23)

The law of distribution by labor, formulated by Marx, is one of the objective economic laws of socialism. The objective basis of this law is explained excellently by Engels, who in Anti-Duehring wrote that distribution, insofar as it is managed by purely economic ideas, will be regulated by the interests of production. The development of production will be stimulated most by a form of distribution which permits all members of society to develop, maintain and display their capabilities in as many ways as possible. Thus, the founders of Marxism considered distribution as distribution according to the quantity and quality of expanded labor.

In making generalizations about the experience of building socialism in our country and new ways of attracting people to labor, Lenin pointed out that socialism presupposes "social labor with strict accounting, control and supervision on the part of the organized vanguard, the advanced segment of the working people. As part of this, measures of labor and awards for it should be defined."(24)

Lenin attached great importance to the principle of giving each working man an interest in the results of his work. He pointed out that "it is necessary to build each major branch of the national economy on the basis of personal incentive."(25) In analyzing the objective course of the development of the revolution, Lenin comes to the conclusion that socialism must be built "with the aid of enthusiasm born of the great revolution, on personal interest, on personal incentive and on business-like accounting."(26)

In the course of building socialism in the Soviet Union and the people's democracies, a whole system of socialist managerial methods has been worked out. At the base of it is the conscious use of the law of value, cost accounting and material incentives for individual workers and collectives. Material incentives for the working people to take an interest in the development of socialist production are a mighty stimulus in increasing labor productivity, increasing the working people's skills and improving production organization. Putting the economic law of distribution according to labor into effect creates the necessary conditions for the successful development of socialist competition, which is the mighty engine of socialist production.

Marx made the historical contribution of explaining the distinction between socialism and communism. The representatives of various tendencies in pre-Marxian socialism and communism did not go beyond scholastic, artificial definitions and fruitless arguments about socialism and communism. In the given case Marx approached the problem from the point of view of the objective laws of social development. He showed that socialism and communism are two succeeding stages of the economic maturity of the new social and economic system leading to the replacement of the capitalist mode of production. The first, or lower, stage of this system is socialism; the second or higher stage is communism.

Marx' statement of the question of socialism and communism is completely confirmed by the course of history and the practice of building socialism in the Soviet Union and other socialist countries. The Soviet Union had built socialism before World War II and had entered a new historical stage of development — that of the completion of the building of socialism and the gradual shift to communism. After the glorious conclusion of the Great Patriotic War, our country continued its successful passage along this path — a passage that had been interrupted during the enemy attack. The countries that renounced capitalism after World War II, took the Soviet Union's experience into account and are following the tried path of the building of socialism. They see before them the bright prospect of further successful movement toward the higher stage of communism.

As is known Marx gave the fullest definition of the higher stage of communism in The Critique of the Gotha Program. He considered the higher stage of communist society to be the level of development in the new society "at which man's subordination to the division of labor, which enslaves him, disappears; at which the contrast between mental and physical labor disappears; at which labor ceases to be a mere means to live but becomes, itself, the first demand of life and at which, in addition to the development of all sides of individuals, productive forces grow and all sources of social wealth pour forth in full flood..."(27) Only then, Marx said, will society inscribe on its banner: "From each according to his abilities, to each according to his needs."

In citing this definition of the higher stage of communism given by Marx, V. I. Lenin in State and Revolution put special emphasis on the falsity of the usual bourgeois conception of socialism as something that is dead and paralyzed in its given form. "In actual fact," Lenin pointed out prophetically, "it is only under socialism that there begins a rapid real, genuine mass movement involving first the majority of the population and then the entire population, and proceeding forward in all branches of social and personal life."(28)

History has confirmed the profound correctness of Marx' and Lenin's views. At the present time the higher stage of communism is not the distant future but a completely real prospect in the development of the Soviet nation. It is a problem facing the Soviet people, who have all the necessary bases and conditions for accomplishing it successfully in cooperation with the peoples of other socialist countries.

The initial estimates of the growth of the USSR's industrial production during the next 15 years, which have been published, show that during this time our country will reach the present level of production in the USA and, in a number of indicators, will surpass it considerably. In production volume the Soviet Union is catching up to the USA. It is confidently moving forward toward the production of as much meat, milk and butter per capita as is produced in the USA and then as much steel, oil, fabrics, footwear, machines and instruments, etc., will follow.

When the Soviet economy has achieved the quantitative indicators of American production, its qualitative indicators will be immeasurably higher because it is an economy without a polarity of wealth and poverty, without crisis and unemployment, without parasitism and wild competition and without the chase after profit and the destruction of manufactured riches.

The creatives application of the Marxist-Leninist principles for building communism on the basis of the practical experience of the millions also means the further development and enrichment of revolutionary theory as a whole and teachings on the gradual shift to communism in particular. The historical documents of our Party give a profound analysis of the results and prospects for the building of socialism and a scientific basis for major new measures. They arm the Soviet people with accurate knowledge of the path to communism. The Chinese Communist Party and Marxist-Leninist parties in all other countries in the mighty camp of socialism are guiding the great transforming work in creating a new social system and are making an enormous contribution to the development of the theories of Marxism-Leninism.

Under the leadership of the Communist Party, the Soviet people are moving confidently toward communism. The successes in building communism in the USSR are of enormous importance for all countries in the socialist camp above all. True to the noble principles of proletarian internationalism and the international solidarity of the working people, the Soviet people do not intend to go toward communism alone. The movement toward communism inevitably includes the entire camp of socialist countries. In speaking to the workers of the Czepel Metallurgical Combine in Hungary, Comrade N. S. Khrushchev said: "A country with a more developed economy, capable of raising the living standard of its own people still higher, absolutely must aid other socialist countries in equalling its living standard. The production levels in the countries of the world socialist system will doubtless be the same in the future. All countries will draw themselves up to the level of the advanced ones, which will not remain in the same place. We must all enter the communist world together."

The striking prospect for building communism is open before all socialist countries and before the entire world socialist system. It is a prospect of rapid, mutual movement toward abundance, to a higher and higher level of the development of productive forces and to a steady increase in the living standard of the population. This prospect is in striking contrast to the situation under capitalism in which some countries spurt ahead in their economic development by consolidating the backwardness and perpetuating poverty in other countries. It is clear that as the socialist countries move closer to communism, the force of attraction of the ideas of revolutionary Marxism-Leninism will grow greater and greater.

If one approaches Marx' statements about the socialist economy with a firm and unshakable footing in the practice of building socialism rather than in a dogmatic way, they are of enormous help in the clarification and profound understanding of the essence of the socialist economic system and its great advantages over the capitalist system. The entire world sees clearly that the peaceful competition between socialism and capitalism will bring more and mor victories to socialism and will do more and more to confir its decisive superiority over the capitalist system, which has outlived its time.

FOOTNOTES

1. K. Marx, Capital, Vol. III, p. 897-898.
2. K. Marx and F. Engels, Selected Letters, State Publishing House for Political Literature, 1953, p. 63.
3. K. Marx and F. Engels, Selected Works, Vol. II, 1955, p. 23.
4. K. Marx and F. Engels, Selected Letters, p. 385.
5. Cf. K. Marx and F. Engels, Works, Vol. IV, 2nd edition pp. 446-447.
6. K. Marx and F. Engels, Selected Letters, p. 86.
7. K. Marx and F. Engels, Works, Vol. XXVII, p. 524.
8. K. Marx and F. Engels, Works, Vol. IV, 2nd edition, p. 437.
9. K. Marx and F. Engels, Selected Works, Vol. II, pp. 29-30.
10. V. I. Lenin, Works, Vol. XXVII, p. 174.
11. K. Marx, Capital, Vol. I, 1954, p. 85.
12. K. Marx and F. Engels, Works, Vol. IV, 2nd edition, p. 439.
13. Marx and Engels Archive, Vol. IV, p. 119.
14. K. Marx, Capital, Vol. III, p. 833.
15. K. Marx, Capital, Vol. I, p. 532.
16. K. Marx, Capital, Vol. III, p. 273.
17. V. I. Lenin, Works, Vol. XXVII, p. 213.
18. K. Marx, Capital, Vol. I, p. 532.
19. K. Marx, Capital, Vol. III, p. 832.
20. K. Marx and F. Engels, Selected Works, Vol. I, State Publishing House for Political Literature, 1955, p. 52.
21. K. Marx, Capital, Vol. I, p. 85.
22. Ibid.
23. K. Marx and F. Engels, Selected Works, Vol. II, p. 14.
24. V. I. Lenin, Works, Vol. XXX, p. 260.
25. V. I. Lenin, Works, Vol. XXXIII, p. 47.
26. Ibid, p. 36.
27. K. Marx and F. Engels, Selected Works, Vol. II, p. 15.
28. V. I. Lenin, Works, Vol. XXV, p. 443.

L. Skvortsov:

Some Questions of Planning Consumption Goods' Prices

The reorganization of industry and construction management in accordance with Lenin's principle of democratic centralism, advanced new tasks in the field of price formation for consumer's goods.

As is known, until 1957 retail prices were sanctioned by centralized bodies. Retail prices for the overwhelming number of goods (95%) were sanctioned by the USSR Council of Ministers, or by the USSR Ministry of Trade. The excessive centralization of price formation for consumers' goods had a negative influence on the development of commodity circulation. Under this procedure of price formation the time required for sanctioning new prices was prolonged and, as a result, their assimilation and appearance on the market was delayed.

Thus, until 1957 the USSR Ministry of Trade was sanctioning retail prices on all types of textile haberdashery produced in the country. This meant that to start output of new types of haberdashery by enterprises of local industry and by producers' cooperatives for meeting the needs of the population of a given town or region, it was necessary to pass through a complicated time-consuming process of sanctioning technical conditions and retail prices from the region up to the Ministry of Trade of the USSR. Even for sanctioning technical conditions and retail prices of ladies collars, produced by Moscow industry for retailing at the GUM (State Department Store) 3 to 4 months were required. Under such conditions enterprises producing these commodities, foreseeing a complicated route to sanctioning of technical conditions and prices, followed the line of least resistance: they simply limited the mastering of new articles.

Until 1957 the Ministry of Trade sanctioned retail prices on all types of utensils (in metal, glass, etc.), and on all types of clothing, including articles of national assortment. Examples are known concerning certain types of metal utensils, made in Uzbek and Tadjik SSR, which could not appear on the market for many months because, according to the prevailing order, their technical conditions and prices were sanctioned in Moscow; however, there was no need whatsoever for this procedure because national assortments of utensils were sold mainly in the region of their production.

The enactment of the USSR Council of Ministers of March 2nd, 1957, concerning the granting to the Councils of Ministers of Union republics the powers connected with sanctioning prescriptions, technical conditions, standards and retail prices on many food-stuffs and industrial goods was an important link among the measures directed at enlarging the rights of the Union republics. The specific weight of the commodities for which prices are now sanctioned by the republics amounts to about 45% of the entire retail turnover of commodities. In the Union republics retail prices on such important industrial commodities as products of the sewing, furniture, utensils, plates and dishes, metal beds, household articles and hardware, and haberdashery industries, articles made of plastics and many types of building-materials now are sanctioned. In addition, many food-stuffs: sausages, milk, macaroni, candies, wine of grapes and fruits, brandy, non-alcoholic beverages, ice-cream, food-concentrates, culinary products, etc.

The centralized sanctioning of retail prices is retained on bread, flour, groats, meat, fish, canned meat and fish, sugar, vodka, alcohol, cordials, fabrics, foot-wear, knitted goods, furs, durable goods (motor cars, motorcycles, bycycles, refrigerators, washing-machines, radio goods, watches, photographic equipment, etc.), matches, tobacco goods, kerosene, benzine, cement and other commodities, in particular all those which are imported (except fruits).

The new procedure of establishing retail prices is expected to promote a most complete consideration of local conditions in the production of consumer's goods. Under the new procedure favorable conditions for improving the assortment of articles manufactured by enterprises of state and co-operative industry are created. At the same time the responsibility of republic and local organs for the expansion of consumers' goods is increased.

In the majority of Union republics retail prices are sanctioned now directly by the councils of ministers. In the Lithuanian SSR this is the function of the Gosplan of the Republic. As a rule, the councils of ministers of Union republics establish retail prices according to the projects of retail prices presented by the ministries of trade and coordinated with the national state plans and republic ministries of finances. This procedure is followed in the RSFSR, Ukrainian SSR, Belorussian SSR, Georgian SSR, and Azerbaijan SSR. In the Latvian, Armenian and Moldavian republics the projects of retail prices are presented directly to the councils of ministers by the economic councils, ministries and departmental-producers, while in the Tadjik SSR the projects of retail prices are presented by the Gosplan of the Republic.

In several Union republics (Kazakh, Kirgiz, and Uzbek) the councils of ministers establish retail prices only on the most important commodities. The right to sanction retail prices on a considerable number of articles is granted in these republics to the ministries of trade and to the provincial and municipal executive committees of the councils of deputies of working people. In other Union republics ministries of trade either are not at all engaged in sanctioning retail prices (for instance, in the RSFSR), or they sanction the prices for only a very limited number of commodities: jubilee goods, commodities produced only once (in Ukrainian, Belorussian, Armenian republics) or on articles made of waste (for example in the Latvian Republic).

In all the Union republics except Ukrainian, Belorussian, Tadjik and Latvian the right of sanctioning retail prices on goods produced by enterprises of regional, local and co-operative industry out of raw materials of their own procurement and of wastes, is reserved for regional executive committees and the associations of producers co-operatives. In the Lithuanian Republic the rights of the Council of producing cooperatives for sanctioning retail prices are considerably wider. The latter sanctions in coordination with the Republic's Ministry of Finances not only retail prices for commodities produced by enterprises of producing co-operatives from raw material of their own procurement and from waste, but also for all types of haberdashery, toys, articles made of remnants of fabrics, articles of art and also sanctions prices for sewing clothes, linen, and head-gear.

Different procedures for sanctioning retail prices followed by councils of ministers of Union republics reflect specific conditions of production prevailing in a given republic or economic region. The Leninist principle of democratic centralism, providing for unity in the main, is basic, while adjusting to the myriad of details of local conditions and peculiarities, finds its reflection in the newly formed system of price formation for goods of popular consumption. Any stereotyping of the procedure in establishing retail prices in all republics by one and the same scheme would mean infringment of republic rights and in practice would result in the same defects which existed under the old procedure of price formation.

Since the introduction of the new procedure of sanctioning retail prices a comparatively short time has passed. Undoubtedly the procedure followed in the republics will undergo further modification in the interests of maximum expansion of production of consumers' goods and more and more complete satisfaction of the population's needs. At the same time the experience of work of the republic's organs establishing retail prices allows us to draw some conclusions.

First of all, one has to underline that the new procedure of sanctioning retail prices opened wider perspectives for the growth of production of consumers' goods, more complete utilization for that purpose of local potentials and resources. New premises are created for solving the problems of price formation in compliance with new forms of management in the national economy, by considering local conditions of production and realization of commodities of popular consumption in the Union republics. The republic's councils of ministers, economic councils and other republic and local organs are directly concerned now not only with production and trade, but also with price formation. Problems of sanctioning prices for new articles now are solved more rapidly. This has a positive effect on production and on trade of consumer goods.

But one has to stress that possibilities contained in the new procedure of sanctioning retail prices are not yet utilized completely.

First, not everywhere is the proper procedure for solving the problems of price formation for new articles of the light and food industry achieved. In the republics the excessive centralization of sanctioning prices is not overcome; much time is consumed for various coordinations of projects for different retail prices and this in the end delays their sanctioning. Thus, for instance, in the Ukrainian SSR the process of sanctioning prices for toys, chinaware, furniture, and candies dragged on for two, and sometimes four months after the necessary materials were presented by the producing organizations.

Unjustified delays in sanctioning prices occur not only in the republic but also in regional organs. For instance, sanctioning of retail prices for three types of plastic buttons and two types of electric insulation plugs in Samarkand region of Uzbek SSR took more than three months. In the Latvian SSR sanctioning of retail prices on some haberdashery sometimes requires a month or more.

The causes of the delays in sanctioning retail prices are found partly in the excessive complexity of the procedure of coordination of projects of prices with the republics' ministries of finances and state planning commissions. At the same time the fact that in such republics as the RSFSR, Ukrainian and Belorussian SSR the ministries of trade, are deprived of the right to sanction retail prices on consumer's goods — is hardly justifiable. Even on suc commodities as food-concentrates, dehydrated "kisels," yeast, acetic acid, mustard, haberdashery, toys, laundry pins, fishing-tackle, and many others, retail prices are sanctioned by the councils of ministers of these republics.

In establishing retail prices by the republic's organs th old prices and prices established for similar goods in oth republics are not always considered. This defect is particularly felt when establishing prices on commodities delivered from one republic to another. The problem of co-ordination of prices for similar or substitutable commodities, produced in several republics, acquires great importance under the conditions of wide and developing speciali tion of production of consumers' goods in Union republics and economic administrative regions. Absence of such co-ordination results in situations wherein the same commod ties in one and the same community and even in one and the same store are sold at different prices, established at the place of their origin. Thus, for instance, Moscow receives brandy produced by enterprises of Georgian, Armenian, Moldavian, Ukrainian and other Union republics. The price for a bottle of brandy "Zvezdochka" fluctuates, depending of the place of its production, between 35 rubles 20 kopeks (Moldavian SSR) and 47 rubles (Ukrainian SSR). The same lack of coordination exists in the prices for wines of the same name produced by different republics.

Cutlery is produced in many republics. Articles manufactured in the RSFSR, in particular by Pavlov enterprise are exported from RSFSR to Ukrainian, Latvian and other republics. But, cutlery is also produced by Ukrainian enterprises, for instance Dnieper special-steel and by enterprises of Latvian SSR. Because the republics establi prices independently, cutlery produced in the RSFSR is so for 11 rubles per pair (knife and fork), while similar articles, produced at Dnieper steel or in Latvia, are sold for 13 rubles 90 kopeks. Cutlery is sold at different prices not only on the territory of republics which import it fro Ukrainia, Latvia and RSFSR, but even on the territory of republics producing it (for instance, in Dniepropetrovsk or Riga).

One could multiply such examples. Thus, in 1956 the USSR Ministry of Trade lowered the retail prices for tele vision antenna from 90 to 45 rubles. Antenna were sold at this low price in all towns of the USSR. In March 1958 the Ukrainian SSR Ministry of Trade approved a new retai price — 55 rubles — for a lot of 5,000 indoor television antennae. But, because antennae are produced not only by enterprises of the Ukrainian SSR, but also by many other it will result that identical antenna will sell for 45 and 55 rubles.

The councils of ministers of the Tadjik and Turkmen republics revised the retail prices for hand-made rugs. But, for some reason, prices for rugs, sanctioned by the Council of Ministers of Tadjik SSR, are 30% higher than prices for identical rugs produced by Turkmen Republic enterprises. And because rugs are exported by both these republics, the trade organizations have to sell identical rugs at different prices.

Among the serious defects one also has to list instance of too high prices being sanctioned, as compared with existing ones for similar products, especially for commo ties produced by local industry and producers' co-operatives.

The USSR Council of Ministers passing the resolution concerning broadening the power of Union republics in the field of price formation, indicated that, when sanction retail prices, it is necessary to follow the price policy conducted by the government, gradually lowering the level of prices. But in a number of republics, prices for new commodities still are established at higher levels than existing prices. Thus, in the Kazakh SSR the price for a metal bed is sanctioned at 361 rubles, while list price is 241 rubles. The profitableness in beds production amounts to 40 — 50%. In the same republic the retail price for suit-cases was established 52% higher than list price, and for buckets — 55% higher. In the Armenian SSR the retail price for a kitchen-apron of polychlorvynil plastic is sanctioned at 15 rubles, while its list-price is 6 rubles 60 kopeks. Similar events have taken place in other republics too.

In a number of cases when sanctioning new retail prices, the necessity of establishing rounded retail prices for the convenience of the purchaser is not taken into consideration. Thus, the Ukrainian SSR Ministry of Trade sanctioned retail prices for wine-sets at 109 ruble 90 kopeks, 93 rubles 70 kopeks and 77 rubles 10 kopeks. One may ask what prevented establishing prices at 110 rubles, 94 rubles and 77 rubles? In the Latvian SSR retail prices for certain ladies toiletries were set at 59 rubles 70 kopeks and 68 rubles 80 kopeks. It would be simpler to set the prices at 60 rubles and 69 rubles. The possibilities of establishing rounded retail prices are poorly used in other republics and regions too.

Many defects in the practice of price formation under new conditions are explained by an inadequate level of work on economic substantiation of prices. In many cases the local organs, dealing with the problems of price formation, still are superficially studying the dynamics of costs of production, are not seriously interested in the flow of trade, are not properly analyzing the supply and demand for commodities and perspectives of development of production and lowering costs. Thus, for instance, in 1956 in the Moldavian SSR, prices for jam, fruit juices, etc. were set at clearly excessive levels, compared with other republics. When sanctioning these prices, the demand and conditions for realization of similar products in other republics were not studied. As the result, a number of trading organizations of the RSFSR and other Union republics began to refuse to import processed fruits from Moldavia. Only after large stockpiles of unsold products were accumulated in the Moldavian SSR were new, economically better substantiated prices for some products of processed fruits manufactured in the Republic established.

As a result of unsatisfactory work on the economic substantiation of prices, and lack of proper analysis of costs of production, the Voronezh regional trade administration tolerated too high retail prices on some types of commodities produced by local industry and the producers' cooperatives of Voronezh city and region.

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Defects in the practice of price formation in no way are organic defects of the new procedure of establishing prices. They can and must be eliminated.

The experience of work in a number of republics shows that problems of price formation can be solved in a planned manner without unnecessary coordinating of retail prices with numerous organizations. It is not necessary in principle to change the procedure of establishing retail prices adopted by Union republics, but certain adjustments and additions to the procedure should be introduced. In particular, in our opinion, it is already necessary to grant the right to sanction retail prices for those commodities, prices for which now are sanctioned by the Ministry of Trade of Kazakh SSR, to such republics as the Russian Federation, Ukraine and Belorussia. More than that, sanctioning prices on some commodities could be entrusted to the executive committees of regions. Among such commodities could be included many types of haberdashery, household goods, some food-stuffs, for instance the non-alcoholic beverages, etc. In the autonomous republics of RSFSR — Tartar, Bashkir, Dagestan and others — and in the Ujgorod, Stanislav and Chernovitsk regions of the Ukrainian SSR the sanctioning of prices for nationally distributed garments and foot-wear, etc. could be entrusted to the regional executive committees. This would free the councils of ministers of the RSFSR and the Ukraine from the consideration and sanctioning of prices for many commodities and promote a better solution of problems of price formation.

Until recently, excessive centralization of the sanctioning of prices in some republics was justified by groundless references to the fact that the republics' councils of ministers supposedly have no right to pass on for consideration to the regional organs the problems of solving questions relating to prices. Now this formal obstacle is eliminated. Councils of ministers of the Union republics have the power to entrust sanctioning of prices to the councils of ministers of autonomous republics, district and regional councils of deputies of toilers and their organs, district and regional boards of trade, boards of industry and councils of producing co-operatives.

The new procedure of sanctioning prices for products made of waste and scrap, is of considerable importance. Prices for such products, manufactured by enterprises of economic councils and producing co-operatives, are sanctioned now by the district and regional executive committees of councils of deputies of toilers and by councils of producing co-operatives in coordination with trade organs. This procedure of sanctioning prices for products, made of scrap and waste, will promote a more complete utilization of local raw materials for expanding production of consumer goods.

One of the most important and complicated problems of price formation under new conditions is to guarantee uniformity of retail prices. As was indicated in the report of N. S. Khrushchev at the 7th session of the Supreme Soviet of the USSR in May 1957: "Under the conditions of a planned socialist economy unity of economic policy in such questions as wages, prices of agricultural raw materials and produce, wholesale and retail prices should be secured, taking into consideration the necessity of observing proper proportions in distribution of national income, and also of observing correct proportions in the balance of pecuniary income and expenditures of the population."

Unity of prices, sanctioned in Union republics, is ensured to some extent by the fact that they are set in accordance with list-prices. If prices for food-stuffs and industrial commodities, newly produced in individual Union republics, are shown in the price-list, then new prices for them should not be established. Industrial enterprises must produce and trade organization — must sell those goods at prices provided in lists of uniform retail prices.

But, as indicated above, the existence of a list of uniform prices cannot always guarantee unity of prices for all types of production, imported from different republics. Often, in the same towns and even in the same stores commodities appear delivered from different republics and sold at different prices. The present conditions under which retail prices are sanctioned pose the problem of uniform prices in a new way. Practice is indicating some methods for solving this problem. In particular, certain experience was accumulated in sanctioning uniform prices at the point of sale. Thus, for instance, fruits and vegetables purchased in different regions, at different prices, are sold to the population of a given province, town or region at uniform prices.

The Latvian SSR Council of Ministers establishes uniform prices for jam and canned-fruit, imported from other republics. The Belorussian Council of Ministers decided to establish uniform prices for canned vegetables and fruits, purchased in different regions at different prices; these experiences, in our opinion, could be utilized by all republics for a rather wide group of food-stuffs and even industrial commodities.

The expansion of the practice of establishing uniform retail prices at the point of sale runs into some difficulties in settling accounts between industrial enterprises and wholesale and retail trade organizations. As is indicated by practice, these difficulties are not insuperable. The credit system has to play a great role in solving this important problem. For instance a system of special accounts is quite feasible; to such accounts the entire difference between the prices at which the commodities were purchased at the place of their origin, and prices at which they are sold in the regions of sale, would be entered. If the sale price is economically substantiated and established on the level of the average-weighted price of purchase, the balance of this account, as a rule, will be neutral. The State Bank, undoubtedly, could play a role in solving the problem of uniformity of prices.

In the past prices were determined only by the place of manufacture of a given product. The new forms of management of the national economy demand transition to a more perfect system of prices, under which the retail prices of commodities identical in quality and name are sanctioned at the place of their sale. At present the republic and local organs are entrusted with the right of sanctioning uniform prices at the place of sale when it is necessary to eliminate lack of coordination in production price for similar commodities.

Lately, in connection with the expansion of powers of local organs and the change in the system of planning and regulating trade funds, the group of commodities, the realization of which was carried on on the basis of preliminary concluded contracts or single agreements, was considerably expanded. In such agreements not only should delivery dates and amounts be defined, but also prices. The trade organization, knowing in advance the price of a product being purchased can pose at the proper time before the corresponding organs the question of the prices at which these products should be sold to the population.

Under the new conditions the daily control over the observance of basic principles of Soviet policy of prices, first of all of the principle of gradual reduction of prices, acquires particular importance. A merciless struggle against any and all attempts at unjustified raising of prices in narrow local interests should be declared. In those cases when the cost of production and relation between supply and demand allow price reductions on various commodities it is imperative to strive with all persistence for such a reduction. This applies first of all to commodities which are produced by local industry and producing co-operatives where cases of unjustified raising of prices are particularly numerous and amounts of accumulation often are higher than normal.

When problems of reducing prices are being solved in accordance with the lowering of production costs and consideration of the relation between demand and supply, many difficulties arise in connection with the negative approach of financial organs in respect to such measures. Cases are known, when correct proposals for the reduction of prices of a number of articles in Kazakh, Latvian SSR and RSFSR were rejected because of objections raised by financial organs. Local financial organs are not endowed with the necessary power to solve such problems. In order to change the rate of turnover-tax on products manufactured even by a producing co-operative (while retaining the same total sum of turnover-tax) agreement of the Ministry of Finances of the USSR is required, but the latter usually does not understand the necessity of such measures.

In our opinion, an abnormal situation was created when many local managerial organs of national economy receive considerable power, while the republican and local financia organs were deprived of powers necessary for budgeting financial resources within the confines of the republic or region.

In our opinion the time is ripe for extending considerably the powers of local and republic financial organs. Thi will help in solving problems of price formation which will increase the sale of consumers' goods and will observe interests of the budget. In the matter of proper setting of prices the unity of efforts of all republic organs — trade, planning and financial — is necessary.

In connection with the new procedure for establishing retail prices an important task arises — to improve the entire work on the economic substantiation of prices for new commodities. In republic ministries of trade departments dealing with prices should be founded. The apparatus deali with prices should be strengthened also in other republic and local organs. The problem is in seeing that workers dealing with planning and establishing prices study thoroughly along with the current problems of sanctioning prices, the dynamics of costs of production of commoditie analyze the structure of consumers' requirements, and know the patterns of the market. The theoretical level of workers dealing with problems of price formation, and qualifications for this work should be systematically raise

The control over the observation of state retail prices, sanctioned at the centre or locally, also should be intensifi Such control must become a most important function of sta trade inspection.

For the proper organization of Soviet trade, especially i its present stage, timely and complete information of the trading organizations about sanctioned prices play a great role. Now, when retail prices for about one-half the commodities are sanctioned in the Union republics, informatio for trading organizations about the prices being sanctionec acquire particularly great importance.

During the last two years the USSR Ministry of Trade published new editions of price-lists and collections of su plementary retail price-lists. In 1958 this work will be continued.

In 1957 the Ministry of Trade started publishing a Bulle in which the retail prices sanctioned in the Union republic are published. This Bulletin is issued three times a mont The problem is to reduce to a minimum the gap between t time of sanctioning prices in the republics and the time of their publication in the Bulletin. The problem is to arrang that prices sanctioned in the Union republics be published in the Bulletin not later than the month following their san tioning.

Work on publication of retail price-lists also was starte by the Union republics themselves. Thus, the RSFSR Mini of Trade is publishing collections of retail prices sanctio in RSFSR and sending them to all Union republics. The ministries of trade of the Estonian and Armenian SSR sta publishing collections of retail prices in large numbers.

Some regional Trade Boards exchange price-lists with neighboring regions. Thus, for instance, the boards of trade of the city and region of Moscow exchange their price-lists with the trade boards of Leningrad and the region of Leningrad. Similar exchanges take place among the trade boards of Ivanov, Vladimir and Gorky regions. The practice of exchanging price-lists should be extended.

But in the matter of providing trading organizations with price-lists sanctioned in the republics serious defects still exist. In a number of cases the republic ministries of trade do not publish price-lists on time, and thereby create serious difficulties in organizing trade. For instance, in the ministries of trade of the Azerbaijan SSR and Kazakh SSR the retail price-lists for grape wines established on January 2nd of the current year, were distributed in large numbers to the trading organizations only in February.

Timely information from trade organizations about newly sanctioned prices is an elementary condition of organizing trade. Defects in this field should be eliminated in the shortest time.

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Improvement in the system of state management of the national economy demands new forms for organizing the work of price formation. Much has already been done in this respect: the level of work on economic substantiation of prices in the Gosplan of the USSR and in the gosplans of the Union republics was raised; departments dealing with prices are being formed in the republic ministries of trade and other republic and local organs. But the tasks of further perfection of the system of price formation require new organizational forms for directing the activity of various organs dealing with the problems of price formation on the scale of the national economy as a whole.

To secure unity of economic policy in the field of price formation in order to observe a correct proportion in the distribution of national income, in the balance of incomes and expenditures of the population, etc. the strengthening of the All-Union planned direction of the whole process of price formation is necessary.

It was quite proper and timely, in our opinion, that M. Sakov* posed the question about the necessity of creating a scientific center for the study of problems relating to price formation which would be closely tied to economic practice. But we cannot limit ourselves by simply organizing such a scientific center. It is high time to create an All-Union organ, which would bring about coordination of the work of various department and republics in the field of price formation. Such coordination would secure unity of policy on prices, establish proper relations between procurement and purchasing prices for agricultural raw materials and between the prices for mutually exchangeable commodities, etc. Thus, for instance, further improvement of the whole mutually dependent system of prices on grain and grain products is necessary (the procurement and purchasing prices for flour, retail prices for bread, bakery products, macaroni, groats, etc.). Establishment of correct relations between prices for commodities manufactured of the same initial raw material or representing different stages of its processing, requires coordination of activities of various departments in the field of price formation. Such coordination is also needed for securing unity of retail prices (at the place of sale for products of the same kind, but produced in different republics. Finally, the inspection to make sure the principles of Soviet price policy are observed demands creation of a united center for coordination and control over the entire work of price formation. In our opinion, its functions should be in setting up general methodological principles for price formation and control along with the preservation of operational independence of the organs solving practical problems related to sanctioning prices.

The first results of the work of local organs in price formation testify that measures taken to extend the powers of republics in the field of establishing retail prices were timely and correct. The new procedure for establishing prices can and must become an important stimulus for expanding the production of consumers' goods and for a better organization for selling them. The task is to eliminate in the shortest time the still existing defects and to solve certain urgent problems of coordination of work on price formation on an All-Union scale.

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* See article by M. Sakov "Karl Marx's Theory of Value and Its Application in a Socialist Economy," published in No. 7 of magazine "Communist," 1958.

V. Mezentsev:

The Development of the Chemical Industry — One of the Most Important Economic and Political Tasks

The chemical industry is one of the decisive branches of heavy industry. Chemical engineering is one of the basic directions of technical progress; it implies planned development of all aspects of the chemical industry. The introduction of chemical processes and chemical products into all branches, and first of all, into those which are decisive, assumes the most complete and economical utilization of matter and energy. In a socialist society chemical engineering allows us to solve many very complicated economic problems. Among these is the steady expansion of industrial production of new materials in accordance with the growing demand that is developing on the basis of higher technique. Along with this, chemical engineering ensures the creation of unlimited possibilities for broadening the raw material base of many branches of industry. At the same time the introduction of new chemical products and chemical processes into agricultural production secures the growth of soil fertility, and more effective stock breeding and crop preservation.

Chemical engineering allows us to achieve a sharp intensification of many manufacturing processes on the basis of applying chemical methods in various branches of the economy. This leads to an economy of time, basic funds and circulating assets and consequently to more profitable work in individual enterprises and entire branches. The rational solution of these economic problems considerably increases the productivity of social labor and promotes the thorough utilization of the inner reserves of socialist production. Hence the rapid development of chemical engineering has an enormous role in solving concrete problems of communist construction.

Comrade N. S. Khrushchev said in his report at the May 1958 Plenum of the CC of the CPSU: "Now one of the most important and urgent tasks is to secure in a short time the rapid development of the chemical industry and to create a strong industry for manufacturing polymeric substances. Under present conditions this problem acquires great state and political importance."

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Thanks to the achievements of chemistry we are mastering more and more thoroughly the methods of transmuting substances and producing synthetic materials. At present there is no branch of technique or branch of economy the development of which is not connected with chemical production. A brilliant illustration of this can be found in modern rocket technique. The development of this important branch demands the creation of new materials, resistant to high temperatures, which are not found in nature; for instance — heat resistant caoutchouc and lubricating oils, new types of synthetic fuel, etc. Chemistry can and does supply all this. The continued development of such branches as machine-building, the radio-technical and electro-technical industries, atomic-industry and aircraft construction depend to a great extent on the growth and perfection of chemical engineering.

At present the extended production of polymeric substances acquires special importance. Those are organic compounds with multiple molecules, the result of polymerization. The molecules of such substances are long chains, composed of an enormous number of atoms. Individual links of such a chain are bound fast by very powerful chemical forces, and therefore the polymeric substances are of exceptional durability. Natural polymeric substances, as cotton, wool, hides, wood and other materials — have long been widely used. Chemistry offers inexhaustible new possibilities for creating polymeric substances by artificial methods. By processing the material, it is possible to change the properties of these materials and to obtain polymeric substances with properties established in advance.

The achievements of chemistry in the field of new synthetic substances are among the most important, economically essential scientific discoveries of the 20th century. Not long ago — 20-25 years ago — synthetic materials were considered defective substitutes for metals, textile fibers or natural caoutchouc. Now the production of synthetic polymeric substances has reached a level at which their properties and possibilities considerably excel all known natural materials. Modern technique, developing at an exceptionally high tempo, demands constantly new materials, combining the most diverse properties. Such materials, which nature cannot provide, are produced by the chemical industry. Synthetic polymeric substances already are widely utilized in the economy. Different plastic articles, fabrics and technical articles made of chemical fibers, synthetic caoutchouc, artificial wool and artificial leather are used at an increasing scale in the economy. Synthetic polymeric materials, which are cheap and durable and possess many valuable properties which are not found in natural substances, find limitless application. They are increasingly supplanting the old materials known by humans for generations: wood, metals, glass and stone. The development of many modern branches, tied up with new techniqu is unthinkable without these remarkable substances. The multiformity of their properties, easiness of processing into articles, high economic effectiveness and the existence of an extensive raw material base: all this makes the production of polymeric substances a most important branch of present-day industry, developing at a rapid tempo. It suffices to say that the world production of synthetic polymeric materials is now already twice above the production of copper, aluminum, zinc, and other non-ferrous metals. In 1956 the world production of plastics (without the USSR) amounted approximately to 3.5 million tons; of chemical fibers — about 2.5 million tons and of synthetic caoutchouc — 1.4 million tons.

At the present level of technical development of the productive forces the extensive utilization of synthetic materials is a very important factor for further technical progress and extensive growth of the productivity of social labor in all branches of the national economy. The polymeric materials are a source of first-class raw material for the decisive branches of heavy industry. They allow us to economize a great amount of ferrous, and what is particularly important, of non-ferrous metals, promote the industrialization of construction and improve production processes and in the end secure the growth of labor productivity.

A rapid development of the production of such materials will give our country enormous additional resources of raw materials for manufacturing various consumption commodities. Jointly with agricultural raw materials this will make it possible in the near future to guarantee the requirements of the population in textiles, clothes and footwear. The sharp expansion of synthetic material production is in principle, a new departure in the economic development of our country, promoting the acceleration of the tempo of technical progress of the national economy as a whole. The utilization of polymeric substances in industry and construction opens on a constantly increasing scale new perspectives for the further mighty development of the productive forces in our country.

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The tempo of introduction of plastics in various branches of the economy is steadily increasing. It suffices to say that at present in the USSR more than 2,000 articles made of synthetic materials are employed. The characteristic peculiarity of plastics is the unusual diversity of their properties. Plastics are lighter than metals. On the average they are two times lighter than aluminum and 5 to 8 times lighter than steel. At the same time many of them excel steel in durability. They can be used even for manufacturing armor for tanks. In one and the same type of plastics very often the most diverse, valuable properties are combined. For instance, the widely known plastic type — organic glass — is as transparent as ordinary glass, and at the same time is very firm. Other types of plastics possess at one and the same time such properties as elasticity and frost-hardiness, low electro-conductivity, durability, etc.

It is well-known that the so-called precious metals — gold and platinum — are very stable when exposed to acids. Plastic "teflon" excels them in stability: it is not corroded by acids, nor by their mixtures. It does not burn and does not sweat in water and remains immutable when cooled to minus 200 degrees Centigrade or when heated up to plus 300 degrees Centigrade. "Teflon" is also a good insulator.

Plastics are easily treated mechanically. They can be pressed, cast in molds, ground, polished, bored, welded, glued together, and stretched into threads and ribbons. By foaming the plastic can be made exceptionally light. Some of these plastics — "penoplastics" (foamy plastics) — weigh hundreds of times less than steel and are tens of times lighter than cork. "Penoplastic" resembles sponge, and is impervious to water or gases. A boat made of this material will not sink even if filled with water up to the edges. Plastics are more durable than steel and lighter than water, transparent as glass and elastic as rubber, they muffle sounds and do not conduct heat, they are heat-resistant and acid-proof, they easily yield to various types of processing. All these qualities make plastics irreplaceable in solving many complicated technical problems. Plastics can meet the most diverse demands of constructors and technologists. In many branches of industry plastics can be used on the broadest scale.

About 50% of all the plastics manufactured at present are used in machine-building. One ton of plastics replaces up to three tons of non-ferrous metals. Every ton of plastics, used as a substitute for metal, creates more than five million rubles in savings. We have already started to use plastics for manufacturing bearings, bearing-brass, plugs, rack-wheels and brake-shoes. Such parts usually are better than those made of metal; as for durability and longevity, they are much lighter and considerably cheaper. The cost of many plastic machine parts is 5 to 10 times lower than those made of bronze and 15 times cheaper than those made of babbit. Moreover, the use of plastics allows us to create articles with new, very valuable properties. For instance, bearings and gear-wheels made of "textolite" do not require lubricating. Bearings made of "textolite" can sustain an enormous load — up to 2.5 tons per square centimeter. Such bearings are used for excavators, rolling-mills, hydro-turbines, etc.

From thin sheets of wood, wood-pulp, glass-fiber and even paper, after processing by artificial pitches and pressing highly durable plastic masses, or as they are often called — plastics can be obtained. From these, various parts of machines and instruments are manufactured, which possess many advantages over those made of metal. For instance, at the Gorky automobile factory for several years bushings made of wood-plastic have been used on the "spraying conveyors" of the foundry shops. They work without any lubrication 3 to 4 times longer than roller-bearings. In the production of dowels, used in manufacturing ply-wood, small ends went to waste and usually were burned. Now from such waste high quality wood plastics are made, which successfully supplement even hard alloys. The technology of manufacturing shuttles, pressed in one piece for looms, is being developed; experience in using them at the Leningrad textile mills shows that they serve much longer than ordinary shuttles.

For a long time high-quality steel was considered as the only material fit for manufacturing punches. Now plastics are a perfect substitute for steel. One such punch was demonstrated in 1958 at the exposition of "polymeric" materials in Moscow. In spite of the fact that this punch manufactured more than 2,000 parts made of steel, there were no signs of wear and tear on the punch. The production of plastic punches and instruments instead of steel allows us to shorten the manufacturing time of complex punches by 2 to 3 times and of simple (ordinary) punches by 8 to 10 times, and to do it with 5 to 6 times less labor expenditure.

The extensive introduction in machine-building of new synthetic materials having high mechanical durability and resistance to oils and oil products will allow us to manufacture out of plastics entire groups of machine parts, and this will considerably cut down the use of non-ferrous metals.

One of the large-scale consumers of plastics is motor-car construction. In modern automobile there are more than 200 parts made of plastics. In the next seven years the utilization of plastics in motor-car construction will increase. If at present 2.5 kilograms of plastics is used for each car, in 1965 it will be up to 20 klgs. In the course of 1959-1965 our motor-car industry will receive 100,000 tons of plastics. Their introduction will allow us to economize about 5,000 tons of non-ferrous metals and 200,000 tons of plate.

The economic effectiveness of using polymeric materials in this branch of industry can be illustrated with the example of the Moscow carburetor factory. The handle of a transmission gear now manufactured by casting under pressure, weighs 30 grams, while the same handle, made of plastics, weighs only 7 grams. The transition to the new material will allow that factory to economize 4.5 tons of zinc alloy in a year, which could be used for manufacturing other products. Manufacturing only 18 types of automobile-parts with plastics would yield, according to calculations of workers of that factory, 1.5 million rubles economy.

Let us cite another example from the practice of motor-car construction. To make an automobile door of metal seven different punches are needed, while to stamp a plastic door it is enough to use two punches. The use of plastics in constructing an automobile lowers the expenditure of steel approximately 20-25% and decreases the weight of the car by tens of kilograms, which improves its operational qualities and lowers the expenditure of fuel. The use of punches made of plastics in motor car construction will allow us to accomplish the transition from the output of one type of car to another in a shorter time. The sharp lowering of automobile weight will allow us to cut down the expenditure of fuel by 1 to 1.5 liters per every 100 kilometers and mastering the process of making automobile bodies of plastics will have an enormous economic effect.

Among the large-scale consumers of plastics is the aircraft industry. The number of parts made of polymeric materials in contemporary jet-propelled aircraft and turbojets amounts to tens of thousands. Along with the increased use of plastics in the aircraft industry the production of separate groups of airplane parts will be accelerated considerably. Thus, for instance, when manufacturing aircraft wings out of light alloys, one has to clench tens of thousands of rivets. With plastics one can make the same wing in one piece, without riveting or welded joins. The constantly expanding use of new synthetic materials in this branch of machine-building is the most important condition for its rapid development. In order to build aircraft able to accomplish high-altitude flights at supersonic speeds plastic articles of an entirely new type are necessary: unbreakable heat-resistant glass for the cabins, powerful heat insulators, capable of protecting fliers from extreme temperatures, and so on.

The use of plastics in the machine-tool industry has great economic advantages. Many tool parts can be produced from plastics: pulleys, gears, guides, etc. This lowers considerably the cost of production and improves the operational qualities of the machine-tools. Thanks to plastic parts and groups machine-tools work noiselessly and at a higher speed. In 1965 our machine-tool industry will use annually 5 to 7 thousand tons of plastics, which will replace 20-25 thousand tons of metal and annually result in about 150 million rubles economy. Out of this metal 20 to 25 thousand machine-tools could be manufactured.

The use of plastics for manufacturing various types of equipment and instruments for pits is very advantageous. A pit-truck made of metal with a freight-carrying capacity of one ton weighs about 200 kilograms. If made of plastics — glass plastic — its body would weigh only 80 kilograms. In 1965 our industry will turn out 190,000 such trucks. The duration of their service is twice as long as trucks made of metal. The replacement of up to 50% of wood and metal pit bars (props and tops) in pits by fastenings made of glass-plastic will save our country about one billion rubles in a year, will make easier the work of timberers and will free tens of thousands of men occupied in underground work. The plastic pit bars already passed laboratory tests at the Research Institute for Coal.

In all branches of the economy electric cables and wires are used extensively. In the past lead, cotton-fabrics and caoutchouc were used for insulation. Now these materials are being replaced by plastics. During a period of seven years (up to 1965) the cable industry will receive for this purpose 680,000 tons of plastics — polychlorvynil, polyvinyl chloride and polyethylene. This will economize 532,000 tons of lead, 33,000 tons of cotton yarn and 90,000 tons of caoutchouc. The total economy will amount to eight billion rubles.

The economy suffers great losses from the corrosion of metals. Only recently these losses constituted about one-third of the total output of metals and alloys. Since the beginning of the century in different countries extensive scientific-research work has been carried on for finding reliable and cheap methods to protect metal from premature destruction. Large sums of money are appropriated for that purpose. One of the effective means for combating corrosion is found in the use of plastics. Thin films (pellicles) of polyethylene, vinylplast, teflon and other polymeric materials could serve as a reliable armour not only for metals, but also for wood and concrete. In the Union Research Institute for Autogenous Processing of Metals the "UPN-4" plant was constructed, in which plastics, heated in a gas flame, fall in even layers on the surface of the article. Covering pipes and various vessels with plastics protects them from the corrosive effect of acids. The utilization of protective plastic films led to a sharp decrease in the enormous losses of metal from corrosion.

In the preparation rooms of machine-building enterprises the use of phenol-resins for forms made of cork used when casting metal, increases labor productivity by 30%, lowers the expenditure of metal by 15-20% and decreases the expenditure of moulding materials 7 to 8 times.

In many branches of the national economy a great number of metal pipes are used. But they are expensive, heavy and sometimes are not quite in accord with technical requirements. At present in the Soviet Union the technology of manufacturing pipes of plastics is being worked out. Polyethylene pipes have great economic value. They are used for pumping the most diverse liquids and gases — oil, oil products, acids, alkali, natural gas, milk, etc. Such pipes are very durable, are not subject to corrosion and their weight is much lower than that of metal pipes. For a plastic pipe-line low temperatures are not dangerous: if the liquid freezes in the pipeline, the diameter of the pipe will dilate and it will not burst. It is also very important that 20-25% more liquids could be transported through such pipelines than by metal pipelines, thanks to the smooth surface of its walls. And in this case a lower pumping station capacity would be required. The transportation of small diameter polyethylene pipes is eased by the fact that they can be rolled in rouleau. The use of such pipes would save hundreds of millions of rubles.

Polyethylene films find the most diverse applications. If bread is wrapped in a thin film of polyethylene it remains fresh for several days. Such a film can reliably protect cheese, dairy and meat products from drying which results in a very tangible saving. From polyethylene film are made folding over-shoes and galoshes — very comfortable, light and inexpensive.

Broad perspectives are opening for the use of such plastic films in agriculture. Light and durable plastic films replace the heavy and expensive tarpaulin for temporary covering of grain and vegetables while transporting various agricultural produce. Thin transparent film made of polyethylene, acetate cellulose, "terilene" let the ultra-violet rays pass. This makes it possible to replace the glass in hot-houses and hot-beds. The sun radiation can easily penetrate through the synthetic film, and this promotes the development of the plants. The replacement of glass by films lowers the cost of construction of hot-houses and hot-beds

6 to 8 times. The construction of new type hot-beds with electric heating costs 150 to 200 thousand rubles per hectare against 1,170,000 rubles spent on ordinary hot-beds with electric heating.

During one of the experiments using a large plastic sheet for covering the contents of a silo, the contents were preserved for six months. The loss in nutritional value did not exceed 6%; when storing in open silo-pits the losses amount to 20 to 50%.

At present manufacturing trucks and trailers for the transportation of liquid and hard and dry freight from glass plastics, and making light collapsible cow sheds and other agricultural buildings has begun. Their operation is exceptionally effective.

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Utilization of plastics in building, especially dwellings, results in enormous economy. Plastics are better building-materials than wood, brick, stone and roofing-iron. For instance, reinforced plastics of glass fiber are as light as dry wood and as durable as steel. They do not burn, rot or rust and are 20-30 times lighter than brick. Glass plastics are approximately 1.5 times lighter than duralumin, 4.5 times lighter than steel and in their durability are comparable to non-ferrous metals and alloys. Tentative calculations show that panels made of glass-fiber plastics combined with insulating porous layers lowers the weight of one cubic meter of a building more than 20 times compared with a brick building. In housing porous plates would find application. These light porous plastics are poor conductors of heat and sound. At present they are used on aircraft and in all-metal cars, on buildings — for heat and sound insulation of walls and ceilings.

Many enterprises began to produce so-called wood-shaving plates. They are manufactured of waste from woodworking — shavings, sawdust, which are pressed with synthetic pitch. Such plates are used for manufacturing details of standard houses and furniture. Every cubic meter of wood-shaving plates allows us to economize on manufacturing furniture 2.5 cubic meters of saw-timber. In 1957 the Seletsk housing combine turned out experimental lots of fibrous-wood plates of heightened durability, impregnated with synthetic pitch and painted. Replacement by this material for floor boards will save 20 rubles per square meter. Other types of plastics, for instance, plastic made of several layers of paper, impregnated with synthetic pitch and then pressed, will have diverse applications in construction. This material can be given any design or appearance, for instance that of silver birch or marble. These are very long-lasting and beautiful wall-paper, which are easy to apply to walls and will not burn. Floors covered with plastic plates would save 26,000 rubles per thousand square meters compared with parquet floors.

At Podolsk the first lime mill in our country producing decorative plates of synthetic pitch — "polystyrene" — was founded. Many-colored plates give an attractive appearance to the premises. The cost of facing one square meter of surface would amount, according to calculations of the workers of that mill, to 20-25 rubles, compared with 46 rubles for facing with ceramics. Experience shows that such production could be arranged by every economic council. The production of mineral-wool warming plates is widening. A house built of such plates is 60-65% lighter than one with common brick walls, while the expenditure of labor erecting it is 10-12 times lower. The "Glavmosstroy" turned over a number of such buildings in Moscow. Millions of rubles are spent annually for painting houses. After a few months the paint fades, peels off, walls are stained. When faced with plastic plates, which retain their color and lustre well and for a long time, the outward appearance of houses is much better.

Durable roofs of glass-plastics, sanitary and technical equipment, wall-panels, window frames, flights of stairs, floors, wall facings are not the only uses for plastics in housing and industrial constructions. The manufacture of new types of facing, upholstering and insulating materials and also furniture and linoleum from chemical materials will allow us to improve considerably the quality and lower the cost of housing. The introduction of new types of plastic building-materials will make it possible to save more than 12 million cubic meters of timber per year. The scale on which plastics are used for construction can be judged by the fact that the world production of plates from fibrous wood and wood-shavings impregnated with phenol and carbamide pitches in 1955 amounted to 3.2 million tons. In 1965 we will produce building-materials which utilize synthetic pitch in the following amounts: plates of wood plastics for floors and walls — 18 mil. sq. meters; foliated plastics in sheets — 10 million square meters; linoleum — 90 mil. sq. meters; heat-insulating plates of polystyrene — 200,000 cubic meters.

The rapid tempo of chemical industry development will allow us to use plastics in housing as one of the basic building-materials. Extensive utilization of synthetic polymeric materials is industrializing building, allows production line output of components for each edifice which will be assembled at the building site by the lightest mechanisms. When the component parts of a building are manufactured at a factory, the assembly and construction at the building site will take only a few hours. Such houses already were created for the drifting "North Pole" stations. Collapsible houses made of "foamy plastics" successfully passed tests. Similar houses, undoubtedly, will be used in the near future on the construction of railroads, hydroelectric power stations, on distant pastures, field-camps, etc. At present the Institute "Mosproyekt" is working on a project for a five-story house, in which the outer walls, partitions, floors, sanitary technical and other equipments will be made of plastics, while the frame-work and overlappings — of ferro-concrete. The entire kitchen and bathroom groups will be assembled at the factory and delivered to the building-site as a booth, ready to be installed. In such a house there is no need for white-washing (or painting) the ceilings, no need for papering the walls; there will be no moulding or fretwork, no outside sounds will penetrate into it.

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Caoutchouc and rubber goods play an important role in the national economy, expecially in motor-car transport, aviation and machine-building. Caoutchouc is an excellent insulator for electricity. It resists abrasion very well and some special grades of rubber are superior even to steel in resistance to abrasion. Besides, caoutchouc differs from all other materials known to contemporary technique in its exceptional elasticity, it can stretch to several times its length and then shrink rapidly. Rubber can become 10 to 11 times longer without changing its original properties. A rubber cord of one square centimeter in diameter can hold more than 300 kilograms. Caoutchouc belongs to the same group of polymeric substances to which plastics and chemical fibers belong.

The constantly growing demand for caoutchouc articles early in this century posed before scientists the task of creating artificial rubber. Our country could not reconcile itself to the necessity of importing natural caoutchouc. As early as 1926 the USSR Supreme Economic Council announced an international competition for the best industrial method of producing artificial rubber. Scientists of all countries could take part in it. Soviet science won the victory. The Jury accepted two methods, the authors of which were Soviet scientists S. V. Lebediev and B. B. Byzov. Synthetic rubber is obtained from ethyl alcohol, according to the method of Academician S. B. Lebediev, or from oil, according to the method of B. V. Byzov. Production of synthetic rubber gives enormous savings of social labor. To get one thousand tons of natural caoutchouc it is necessary to cultivate about three million rubber-bearing trees and to spend the labor of 5500 men during a year. Production of the same amount of synthetic rubber requires the expenditure of labor of 15 men during one year. Synthesis of caoutchouc also allowed us to solve another problem — to change and improve the qualities of this material.

Contemporary technique poses most diverse demands to rubber products. In one case high elasticity is required, in another — great durability, in a third — heat resistance, etc. All these requirements are met by different types of synthetic rubber. At present in the USSR more than 20 types of synthetic rubber are produced, possessing many valuable properties, which are not found in natural caoutchouc. Thus, for instance, the nitric synthetic rubber is very steadfast for oils. Polyisobutylene rubber can stand the effect of even the strongest acids and alkali. "Chloropren" rubber is used for manufacturing electric cables, protective clothing, envelopes, balloons (aerostats) and various oil-proof articles. It does not burn and is very elastic. In the electrotechnical industry one ton of this synthetic rubber replaces up to six tons of valuable nonferrous metal such as lead. There are synthetic rubbers with high degrees of resistance to benozole, frost-proof, non-impregnable for gases and steadfast against effects of different chemical substances. In a number of branches of industry the synthetic rubbers completely supplanted natural caoutchouc, for their properties are better. For instance, hoses for pumping fuel are now made only of synthetic rubber, for they are more durable. Mass production of modern automobiles, aircraft and rockets is impossible without synthetic rubber possessing diverse and highly valuable properties.

The Voronezh factory of synthetic rubber, first in our country, mastered the technique of economically producing oil filled caoutchouc. It is very durable, its products serve 15-20% longer than others. The annual savings resulting from the introduction of this type of caoutchouc was over 200 million rubles. When this enterprise completely switches to the production of oil-filled caoutchouc (which is planned for 1960) the savings will be many times higher. The output of such caoutchouc will free for other purposes hundreds of thousands of decaliters of ethyl alcohol. Introduction of this economical synthetic material into industry will save some 16-18 million poods of grain by 1961.

Development of the so-called "isoprene caoutchouc," which is very similar to natural rubber in its properties, was a great victory for Soviet chemistry. Until very recently one very important quality of natural caoutchouc — its high elasticity — remained unsurpassed. Now this problem is solved. The new caoutchouc is very similar to the natural one in its elasticity. Raw materials for it are the cheap gases received in the processing of oil.

Most rubber is used for manufacturing tires. Lengthening the time of their service is of great importance to the economy. For instance, if the length of time of service is increased by 10%, it would save 50 million rubles for every million tires produced. Tests that were carried on recently showed that tires made of "isoprene caoutchouc" serve almost two times longer than the serial tire covers of regular synthetic rubber. New tires endured an average of 59,000 kilometer of use — i.e. almost as much as the tires of natural rubber can endure. Now a more perfect material for tires is available — "polyuretan." In its wear and tear resistance it is twice as good as natural rubber. Tires made of "polyuretan" will serve as long as the automobile itself or until major repairs are required. Tire durability is determined to a great extent by its textile base — cord fabric. It bears the main load on the wheels of the car. At present viscose artificial fiber is used as cord-fabric. Such tires last 1.5 times longer than cord tires made of cotton fiber. Extensive use of tire cord made of artificial viscose fiber gives enormous savings to the economy. But it is still more effective to use synthetic fibers, in particular "capron." Utilization of this fiber improves considerably the quality of tires, lowers its weight and increases its carrying capacity. Tires for heavy trucks and for modern high-speed aircraft can be produced only of a cord fabric made of chemical fiber. Automobile tires made of synthetic "polyamide" fiber can endure 15-17 thousand kilometers more than tire of cotton cord-fabric. If the production of automobile tires would be completely transferred to synthetic cord, it would save about 2.3 billion rubles per year.

It was not long ago that most synthetic rubber was made of alcohol, extracted from food-stuff raw material, mainly potatoes and grains. The resolutions of the 20th Congress of the CPSU provided for the transfer of the production of synthetic rubber completely to non-edible raw materials, mainly to products of processing oil and natural gas, as well as to wood alcohol. As to its significance, let us cite one example. To get one ton of ethyl alcohol not less than four tons of grain or 10 tons of potatoes is required, and the expenditure of more than 200 man-days. But the same alcohol can be produced from petroleum gases. Its cost of production is halved; for the production of one ton only 10 man-days are required. Our Party is taking measures to transfer the production of synthetic materials to nonedible raw-materials. In 1965 it is planned to use for the production of various chemical products more than 2.5 million liquid hydrocarbons gathered from processing gases. If instead of these gases, edible raw material were to be used, more than 300 poods of grain or 13 million tons of potatoes would be required.

At the May Plenum of the CC of the CPSU it was decided to extend by 1965 the capacity of factories of synthetic rubber 3-4 times.

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At present the production of chemical fibers — artificial and synthetic — has become one of the most important branches of our national economy. Of these fibers many articles are manufactured. Thus, of the caprone-fiber, which is twice as durable as natural silk, not only are beautiful fabrics and stockings manufactured, but an excellent raw material for manufacturing many technical articles is also available. For instance, very durable parachutes and fish-nets, which do not rot and do not require drying. Cables, made of caprone, are more durable than those made of steel.

Artificial fiber (artificial silk) was created in the last century. The raw material for manufacturing artificial fiber is wood cellulose. At present several methods of producing artificial silk are available; they depend on the chemical substances used in processing cellulose. The most widely used is the viscose method. One enterprise manufacturing artificial viscose silk can produce in one year as much fiber as world production of natural silk.

Industrial production of synthetic fibers, started only 15-20 years ago, is developing at an exceptionally rapid tempo. During the period 1946-1956 world production of synthetic fibers increased more than 120 times. Now more than 20 different types of synthetic fibers are known. The raw material utilized for them are: coal, petroleum gases, and other widely available cheap substances. Aside from caprone (in different countries it is named "perlone," "grilene" etc.) the production of such synthetic fibers as "lavsan," "nitron," "enanth," "elastic," "anid," etc. was also mastered recently. The new fibers are superior in many ways to natural fibers — cotton and wool. Articles made of the new synthetic fiber "nitron" are very durable. They can stand very high temperatures, are moth-proof and mould-proof, do not shrink, do not lose their crispness, and do not require ironing. Nitric fibers in many respects are superior to natural wool. Gloves, socks, sweaters made of "nitron" are as warm and soft, as those made of camel hair, and are twice as durable. Drapes made of this remarkable fiber recently in Leningrad, have an excellent appearance. The new fiber is exceptionally resistant to atmospheric influences and sun-rays. A special test of nitric fabric was made: it remained under the rays of the southern sun, in dampness, under rain, snow and wind; after all this the fabric did not even change its smart appearance. In the near future at three enterprises of the Moscow economic council they will begin production of fabrics from "nitron."

Fiber of "lavsan" have excellent technical and consumer properties. By their outward appearance they are similar to wool. A suit made of "lavsan" fabric does not require ironing; folds do not disappear even after wetting. "Lavsan" fiber resists high temperatures and various chemical substances well and is a poor conductor of electricity. These qualities of "lavsan" open wide perspectives for its technical utilization. At present a large-scale enterprise for the production of "lavsan" exists in our country, and in the near future we will have several of them. Output of woolens could be increased 30% by using fibers of "lavsan" and "nitron."

Utilization of fabrics made of synthetic fibers (caprone, anid) for conveyor belts doubles the time of their service saving 900 million rubles per year.

Artificial fur, manufactured of synthetic fibers is beautiful, light, durable and cheap. Artificial fur made of "caprone" was tested at the "Red Rose" combine silk-weaving factory at Kalinin and other enterprises; these tests showed that it can serve four times longer than natural furs. The cost of raw materials used for manufacturing artificial "caprone"-fur is four times lower than the cost of natural fur. Artificial astrakhan is manufactured of synthetic fiber and its properties are not inferior to the natural, while its cost is considerably lower. The output of this beautiful and durable fur will increase from 300,000 square meters in 1957 to 3,670,000 in 1960; by 1965 it will increase 14 times.

No doubt, chemical fibers have a great future. They not only possess of many valuable properties, but their production is economically advantageous and can grow endlessly. Our synthetic fiber industry has available practically inexhaustible raw material resources — wood, petroleum gases, by-products of the coke industry, wastes of agriculture. It would suffice to say that from one ton of wood-pulp it is possible to get 4,000 square meters of viscose fabric. The production of one ton of this fiber requires 2.5-3 times less expenditure of labor than the production of one ton of cotton yarn. The annual production of a synthetic fiber factory can substitute for the wool of 15-20 million sheep.

To what extent the role of artificial and synthetic fibers is important in the economy of our country can be judged by the fact that the plan for 1965 calls for 188,300 tons of staple fiber and 275,600 tons of artificial and synthetic silk to be used for fabrics and knitted goods of artificial and synthetic fibers. To get this amount of wool and cotton it would be necessary to breed 105 million sheep and to place 380,000 hectares of land under cotton.

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In a small article it is not possible to cover everything that the many branches of the rapidly developing chemical industry will give to the national economy. In conclusion let us bring up a few more examples, illustrating the many-sided influence of the achievements of contemporary chemistry on the economy of the country.

Electric motors, in which cast insulation of synthetic pitch is used, can function in water. They can be lowered with pumps into holes and wells and used for water supply on remote pastures and collective farms. Machines and apparatuses with synthetic insulation function without interruption in humid air.

A peculiar class of chemical substances — silicon-organic compounds — are beginning to play an important role in contemporary technique. Silicon-organic films can reliably protect stone, stucco and other building materials from moisture. These substances are economically very essential in electrotechnical, radio-technical and other branches of industry. Thus, utilization of silicon-organic insulation in electro-motors prolongs the time of their service by 5-6 times, raises their capacity and lowers machine weights. At present the utilization of such insulation for electric channeling-machines and coal combines saves our national economy about 100 million rubles.

The manufacture of artificial leather is rapidly developing in the USSR. Many technical and household articles are made, which serve much longer than those made of natural leather. For instance, parts of textile machines made of such leather wear out 3-4 times slower than regular ones. Artificial leather can be used in automobile, aviation, polygraphic, furniture and other branches of industry. To meet the growing requirements of light industry and extend production of consumer's goods, artificial kidskin, chamois, kid and alligator leathers are now manufactured. The output of soles, which are produced now by the artificial leather industry, would require the slaughter of 12 million head of cattle per year.

High quality detergents are produced now out of oil by the chemical industry. Such substances lather freely in any water, do not ruin fabrics, and do not affect their color and quality. With these, dirt is washed off easier and quicker even in cold water. The best kinds of toilet soaps are made of synthetic substances, which contain not a gram of animal fat.

Our country has available enormous resources of wood, which is not only a fuel, but is also a very valuable raw material for a number of branches of the chemical industry. From it paper, artificial fiber, wood-plastics, toxic chemicals, turpentine, ethyl alcohol and many other products are manufactured. In the production of alcohol one ton of sawdust replaces no less than 700 kilograms of potatoes or 300 kilograms of grain.

The role of chemical fertilizers and chemical agents for protection of plants is increasing annually in our country. Their utilization has a great effect. For instance,

(Continued on Page 101)

N. Fedorenko:

Some Problems of the Accelerated Development of the Chemical Industry

The resolution of the May (1958) plenary session of the Party Central Committee "On Accelerating the Development of the Chemical Industry and Especially the Production of Synthetic Materials and Articles Made From Them to Satisfy the Demands of the Population and the Needs of the National Economy" and the plan of measures put forth in the report by Comrade N. S. Khrushchev on a rise in the chemical industry constitute a full program for the further strengthening of our country's economic might and for an increase in the material well-being and cultural level of the Soviet people.

Guided by Leninist teachings, the Party and the Soviet government have assured the advantageous development of the branches of industry making the means of production at all stages of socialist construction. The 20th Party Congress once again affirmed the course toward the advantageous development of heavy industry.

The rapid growth of heavy industry assumes the continuous development and improvement of technology and technical progress in all branches of the national economy. In addition to electrification, the integrated mechanization and automation of production and the use of atomic energy, one of the most important paths to technical progress is the introduction of chemistry into the national economy, i.e., the use on all sides of chemical products and chemical processing methods in various branches of industry and agriculture.

At the present stage of technical progress the production of synthetic rubbers, plastics, artificial and synthetic fibers, mineral fertilizers, chemical poisons and other chemical products and the broad application of chemical processes in ferrous and nonferrous metallurgy, in oil, food, textile and other branches of industry are—along with metallurgy, fuel, power, machine-building and construction industries—the basis of heavy industry.

As early as 1918, V. I. Lenin wrote: "The rise in labor productivity requires, first of all, that the material basis of heavy industry be assured, i.e., the development of the production of the fuel, iron, machine-building and chemical industries." Marx' brilliant prediction that the greater mankind's mastery of chemical processes and reactions, the more mechanical processing will give way to chemical production methods is coming true in our time. Chemical processes are being introduced on a broader and broader scale into various fields of industry and are replacing mechanical processes.

The economic importance of the chemical industry in the development of all branches of the national economy stems first of all from its enormous role in increasing labor productivity. With the aid of chemical production methods it is possible to obtain a large number of products of similar or better quality than natural ones with much smaller expenditures of man and machine power. The production of synthetic materials usually requires considerably smaller capital, operating and labor expenditures than does the production of products for the same purposes from natural materials. For example the production of one ton of fiber from cotton, depending on the amount of mechanization of the sowing and harvesting of the cotton and on the yield, requires from 175 to 240 man-days. Of this 97% to 98% of the labor expenditures are in the cotton growing and 2% to 3% are spent in the cotton-cleaning plants. Four hundred and sixty to 470 man-days are required to produce the same amount of fiber from flax. The labor expenditures for the production of one ton of such a synthetic fiber as viscose staple fiber to be used for the same purpose amount to only 56 man-days, of which the production of the basic raw materials (celluloses, sodium hydrate, sulphuric acid and carbon bisulphide) account for 27 man-days and the production of the fiber accounts for 29 work days. While the prices for natural fibers have increased two to three times on the world market during the last 35 to 40 years, the prices for artificial silk have gone down about three or four times.

The production of a highly important chemical product—ethyl alcohol—from raw petroleum requires about one third the operating expenditures (about 2000 rubles per ton) required for its production from edible raw material. The production of ethyl alcohol from hydrocarbon gases compared to its extraction from food products is also characterized by lower labor expenditures as may be seen in the following figures (in man-days):

Potatoes	280
Grain	160
Petroleum gases	10

The use of plastics makes it possible either to replace costly nonferrous metals directly or to replace them with ferrous metals with protective anticorrosion coatings. For example, in many cases it is possible to replace costly, hard-to-obtain lead with cheap polyvinyl chloride plastic or other types of plastic.

It should be noted that when the scale of the production of plastics is further broadened, the difference in the cost of articles will be more significant. In this connection it shoul be kept in mind that with considerably smaller capital expenditures in the plastics industry (including those made for the creation of a raw materials base) than for example, in ferrous metallurgy, it is possible to obtain a considerably larger amount of plastics. While particular capital expenditures for the production of the most common plastics (including expenditures for the raw materials base) amount to about 4000 to 8000 rubles per ton, these expenditures reach 15,000 to 25,000 rubles and more in the production of nonferrous metals. A great many similar examples might be cited.

In order to fulfill the tasks set by the Party and the government for the installation of radio and telephone facilities in rural areas, several million kilometers of radio and telephone communications lines will have to be built in the next five years. In building these lines it will be necessary to use underground cable with vinyl chloride insulation, which will reduce the total length of overhead lines. The following figures allow one to judge the importance and economic efficiency taking this step (see following table).

Every ruble spent for polyvinyl chloride plastic for the production of cable saves three to four rubles in the construction and operation of communications systems.

Various construction parts made with plastics and synthetic resins are characterized by exceptionally great savings. This makes it possible to increase the quality of construction work, to considerably improve the external appearance of buildings and to make a savings of billions of rubles. For example, the production of pressboard and fiberboard from lumber scraps, which are generally thrown away and of which there will be a 150,000,000-cubic-meter supply in 1960, assures the saving of a great quantity of lumber. (In addition, they [fiberboard and pressboard] are superior in quality to the latter [lumber]). The approximate cost of one cubic meter of pressboard is about 600 rubles, which is almost two times less than the cost of one cubic meter of lumber board. It is estimated that in 1960 a saving of about 600,000,000 rubles in operating expenditures will be gained through the use of this material. In 1970 the saving will be about 4,200,000,000 rubles. To produce equivalent quantities of lumber one and one half times more capital investments would have to be made in the lumbering and woodworking industries than would be necessary for the production of corresponding amounts of synthetic resins and pressboard panels. In one year alone the use of new types of building materials will make it possible to replace more than 12,000,000 cubic meters of lumber. The manufacturing of linoleum, paper-base linoleum, high-quality enamels, paints, new types of finishing, covering and insulation materials and furniture from chemical raw materials will make it possible to raise considerably the quality of housing construction and to reduce its cost. In 1965 the building industry will require at least 40% of the total production of synthetic resins.

Comparative savings in the construction and operation of 1000 km. of underground and overhead line

	Unit of measure	Underground cable	Overhead line
Cost of construction	Thousands of rubles	1000	2000
Labor expenditure	Thousands of man-days	2.2	18.8
Lumber expenditure	Thousands of cubic meters	—	37.5
Annual operating cost	Thousands of rubles	11	59

The use of chemical products and chemical processing methods in various branches of the national economy usually makes for great savings as a result of the intensification and the reduction in the cost of production processes, an improvement in production quality, etc.

In many cases the introduction of chemistry into production leads to a real technological revolution. For example, the use of certain chemical products in making form bonds between metal, rubber, wood, glass and other materials makes it possible to do away with several labor-consuming processes. The wide use of artificial fiber makes it possible to reduce considerably the number of technological transfers at textile industry enterprises. Artificial, continuous threads are used directly in the manufacturing of fabrics and consequently, all spinning production operations become unnecessary.

In connection with the use of plastics costly and complex mechanical processing operations are being replaced by very simple pressing operations in which the labor productivity level is higher and operating costs are lower.

One of the simplest organic silicon compounds—ethyl ether of orthosilic acid—makes it possible to produce cast parts that do not need final mechanical processing. More than two tons of sheet metal are saved by making one ton of precision castings. Labor is reduced by 600 to 800 norm-hours. The use of organic silicon compounds in precision casting makes it possible to save 75,000 tons of metal and to release 20,000 workers per year in the processing of 500,000 tons of sheet metal.

Plastics could be used on a broad scale in the production of tanks for the transportation of petroleum products. The capacity of tanks made of glass plastics is 30% greater than the capacity of tanks of the same weight made of metal and their operating life is almost ten times greater than those made of metal. The use of new types of insulation materials with much higher heat resistance makes it possible to increase the power of electric motors considerably. For example, the use of organic silicon resin as electrical insulation makes it possible to increase the power of electric motors by 30% to 40% without increasing their weight and the operating life of these electric motors working under difficult conditions is increased four to five times. The use of organic silicon insulation in mining combines and cutting machines can provide savings of 100,000,000 rubles per year. The use of epoxy resins in the electrical equipment industry in the production of transformers provides savings of four tons of copper for each ton of resin used and the weight of the transformers is reduced four times.

The development of the chemical industry makes it possible to organize mass production of many new types of materials often with higher specifications and features than those demanded by higher technology. The high pressures, speeds, electrical voltages, high and low temperatures widely used in modern technology require the creation of materials with special properties that natural materials do not possess. In his report at the May plenary session of the Party Central Committee, Comrade N. S. Khrushchev pointed out that the solution of complex modern problems of recent technology was, in essence, impossible without synthetic materials with characteristics not possessed by either metals or other natural materials.

Often, the use of chemical methods of processing a substance determines, for all practical purposes, the very possibility of obtaining certain types of products. The use of polyethylene as cable insulation made it possible for the first time to obtain a completely new type of underwater cable and high frequency cable as well. Fluoride plastics have come to be irreplacable materials in the manufacture of coaxial cable and also in cables used for the transmission of frequency modulations.

Synthetic rubber has gained extensive use. Articles made from it are in many cases not only not inferior to products made of natural rubber but are considerably superior to them. The synthetic rubber industry began only two decades ago but hundreds of thousands of items are now included in the variety of articles made from it. The manufacture of modern machines, motors and equipment would be unthinkable without it. Rubber production is on a considerably smaller scale than that of steel and pig iron but is on the level of such highly important and widely used nonferrous metals as lead, copper, zinc and aluminum. In 1956 the world rubber output surpassed 3,000,000 tons, including synthetic rubber, of which the output was 1,200,000 tons.

The resolution of the May plenary session of the Party Central Committee calls for an increase in synthetic rubber production capacity of 3.4 times by the end of 1965 as compared with the 1957 level. The proportion of new types of synthetic rubber with high quality indicators will be considerably increased. Thus, in 1966, 25% of all rubber production will consist of the production of isoprene rubber, which, when used in making automobile tires, doubles their life i.e., increases it to 60,000 km. The chloroprene rubber production capacity will increase six times as compared with 1959 by 1966. Thanks to an increase in the output of chloroprene rubber the need for imported natural rubber will decrease. As a result, currency expenditures will be reduced by about 3,000,000 gold rubles per thousand tons of natural rubber by reducing the imports of natural rubber and by substituting for it chloroprene rubber, which is the cheapest as compared with other synthetic rubbers.

The production of synthetic rubber should be increased solely by expanding the processing of nonedible types of raw materials, mainly petroleum and natural gas. When this is done the technical and economic indicators of this type of production will be radically improved. For example, the cost of synthetic rubber when it is processed from synthetic alcohol (made from petroleum gasses) instead of from grain alcohol is cut in half and the capital expenditures are reduced one and one half to two times. The use of butane butylene is still more effective.

Plastics are important synthetic materials and they should not be thought of only as substitutes for nonferrous metals and a means for combatting corrosion. In many branches of industry, especially in machine building, plastics play the roles of independent structural materials. The rapid growth in the production of plastics with many valuable properties has been brought about by their enormous importance in the development of new technology. Almost 40% of the world's production of plastics used in the electric equipment, automobile, textile, chemical, paper and other industries is used for structural materials. The means for obtaining articles made of plastics with rigidity close to that of steel are well known. Plastics made from the fluorides surpass platinum in rigidity.

The last 15 to 20 years have seen rapid growth in the production of plastics, whose output reached 3,700,000 tons in 1956 in the capitalist countries as against 1,600,000 tons in 1950. The rate of development of the plastics industry in the capitalist countries is considerably greater than the rate of growth in other important branches of industry. From 1950 to 1955, the production of steel increased about 25% while plastics production more than doubled. The plastics output surpassed the production level of such non-ferrous metals as lead, zinc and others. Here we introduce figures on the world production of plastics and non-ferrous metals in 1956 (not including the USSR and China; in millions of tons):

Aluminum	3.0
Copper	3.0
Zinc	2.5
Lead	1.9
Tin	0.2
Plastics	3.7

While the production of nonferrous metals increased 1.6 times between 1940 and 1956 and 1.45 times between 1950 and 1956, the production of plastics increased 10 and 2.4 times for the respective periods. It is necessary to take into account in this that for the same weight in plastics a larger quantity of, say, parts for certain machines and devices, can be manufactured (it is known that plastics have a considerably lower specific gravity). Because of this, more correct conclusions may be drawn from the comparison of the rates of development in the branches of industry under consideration by comparing their production in units of volume. In 1940 the output by weight was only 5.4% of the output of all the abovementioned nonferrous metals but in volume it was more than 28%. In 1956, the output by weight was about 35% but it was more than 135% by volume.

In giving an economic evaluation of the development of plastics production in the USSR one cannot fail to mention that in spite of certain successes achieved by the plastics industry (increase of production capacity and the improvement of its use, the increase in the variety and quality of plastics and also technical and economic production indicators) the production of this industry continues to lag. The present scale of the production of all types of plastics and especially their quality, still do not satisfy the growing demands of the leading branches of heavy industry and this is an important reason for the limited introduction of plastics into the machine-building and other branches of industry. At present the Soviet Union occupies fifth place in the world in the production of plastics.

A condition for the further suceessful development of the plastics industry in the Soviet Union is the expansion of the raw materials base of this branch of the chemical industry, i.e., the creation of the necessary production capacities that would assure that the plastics industry have a sufficient quantity of the necessary basic semifinished chemical products. It is known that a shortage of some kinds of raw materials sometimes leads to a failure to make full use of the existing capacities for the production of plastics and articles made of them including, for example, polyvinyl chloride linoleum.

The domestic plastics industry, formed during the years of Soviet rule, will be developed on an enormous scale in the near future. Towards the end of 1965, the production capacities in this field will have increased eight times as compared with the 1957 level and this will assure further technical progress in the national economy and enormous savings of state funds. For the cable industry alone chemical enterprises must supply 680,000 tons of plastics (polyvinyl chloride and polyethylene) during the next seven years. This will save 532,000 tons of lead, 33,000 tons of cotton binding and 90,000 tons of rubber. The total saving will amount to 8,000,000,000 rubles.

One of the leading branches of the synthetic materials industry is the production of artificial and synthetic fibers, which are finding wide application for household goods as well as in various branches of technology.

Modern science has worked out a number of means of obtaining a number of new textile fibers with properties superior to natural fibers. A major achievement of the last 10 to 15 years was the creation of synthetic fibers from other than natural high-molecule compounds such as, for example, cellulose used for the production of artificial fiber, but from polymers obtained synthetically from the simplest basic substances such as coal and petroleum processing products and others. These fibers have specific and very valuable physical and mechanical qualities and they can be altered according to the field in which the fibers are to be used. The following figures on the structure of the raw materials of the world's textile industry during the past 35 years testify to the rate and scale of the development of this branch of industry (in %).

Years	Cotton fiber	Washed wool	Chemical fiber	Raw silk
1921	79.0	20.0	0.5	1.0
1930	81.0	15.0	3.0	1.0
1939	73.0	14.0	12.0	1.0
1951	70.2	10.9	18.8	0.2
1954	68.8	10.5	20.5	0.2
1956	67.0	10.5	22.3	0.2

These figures show the continually growing role of artificial fiber in the textile materials balance (its proportion exceeds 20%) and the scale of its production continues to expand. In the USA in the textile industry amounts to about 30%. In 1956 the scale of the world's production of artificial fibers was almost 2,700,000 tons (including 310,000 tons of synthetic fibers); wool, about 1,300,000 tons; cotton, more than 8,000,000 tons and natural silk, only 27,000 tons.

The production of chemical fibers is also increasing in the Soviet Union. By 1957 the volume of output in this branch had reached almost 150,000 tons. However, in spite of the annual increase in the production of artificial fiber, the level of its production still does not satisfy the continually growing demands of the national economy and the population for articles made from artificial fiber. The USSR occupies sixth place in the world in the production of artificial fiber. In 1956, 4.2 kg. of artificial and synthetic fiber were produced per capita in the USA, 4.2 kg. were produced per capita in England and only 0.65 kg. in the USSR. At the same time the artificial fiber produced by some of our plants has qualitative indicators inferior to those of imported artificial fiber.

The mighty development of the production of artificial and synthetic fibers on the basis of cheap, basic by-products of organic synthesis is a major source for increasing the productivity of labor. Along with measures for an upsurge in branches of agriculture supplying the textile industry with raw materials it is necessary to take steps for the further development of the artificial and synthetic fibers industry, which is of great economic importance for technical progress in all branches of the national economy and especially for the growth of the production of consumer goods. The use of chemical fibers in their pure form with natural fibers is considerably extending the variety of high-quality consumer goods and makes it possible to satisfy more rapidly and fully the growing demands of the working people for various manufactured goods. The measures worked out by the Presidium of the Party Central Committee and the USSR Council of Ministers and approved by the May plenary session of the Party Central Committee call for an increase of 4.5 times in the capacities for the production of artificial and synthetic fibers by the end of 1965 as compared with 1957. Achieving the mass production of synthetic materials in a short time will bring about an increase in the output of fabrics using artificial and synthetic fibers in 1965 as compared with 1957 in the following amounts: wool fabrics, 2.3 times; silk, 1.75 times; cotton fabrics, six times; knitted fabrics for outer- and underwear made of synthetic and artificial fibers, nine times; stockings and socks, 3.2 times; foot wear made of artificial leather, 2.3 times and footwear with light, porous soles, 40 times.

At the present time synthetic materials—synthetic rubber, plastics and chemical fibers—are not substitutes but independent and highly valuable materials and have been transformed from substitutes into irreplaceable materials.

The achievements of modern chemistry and chemical technology assure a radical expansion of the raw materials base of industry. The introduction of chemistry into the country's national economy will aid in the discovery and development of new natural resources.

The introduction into production of scattered primary types of raw materials (fuels and other mineral resources, water, air, wood and others) and the synthesis under industrial conditions of semi-finished products used as the raw materials for manufacturing finished products (so-called synthesis of raw materials) will aid in the expansion of the materials base and the creation of practically inexhaustible sources of raw material resources for many branches of industry. For example, one of the basic raw materials in the production of artificial fibers is cellulose. Of all the plant materials that can serve as a raw material for making cellulose, wood cellulose is of especially great importance at the present time. Resources of wood cellulose (taking its natrual renewal and the present scale of the production of artificial fibers on the basis of this raw material into account) are practically limitless. From one cubic meter of wood it is possible to obtain 200 kg. of cellulose which is sufficient for making 160 kg. of artificial fiber. From this quantity of artificial fiber it is possible to make 1500 meters of silk fabric or 600 semi-silk suits. In order to obtain a similar quantity of products from natural fiber it would be necessary to process 1,000,000 silk cocoons, shear 40 sheep or to gather one hectare of flax or 0.5 hectares of cotton.

It is necessary to note that cotton wool taken from cotton seeds should also be used for these purposes. It cannot be processed by spinning but is a very valuable raw material for making cellulose. For example, if all the short fibers gathered in the country from cotton seeds in the form of cotton wool were used, the cellulose made from them would be enough to make about 100,000 tons of artificial fiber per year. This would be enough to make about 1,000,000,000 meters of fabric.

Artificial and synthetic fibers, various types of rubber, resins used to make plastics and so on are made on the basis of the processing of chemical products, which are obtained from widely distributed types of raw materials and are not related to local raw materials bases dependent, for example, on the production of agricultural crops in specific regions with the favorable climatic and soil conditions. Thanks to the large-scale production of artificial and synthetic textile fibers stoppages in spinning production because of difficulties in the supply of the natural raw materials (cotton, wool and others) due to harvest failures, which were formerly very common, can be eliminated.

The development of a number of branches of industry is connected with the seasonal nature of agricultural raw materials and with the need to organize its transportation and storage and this requires considerable capital and operating expenditures. At the present time, the enormous and continually growing demand of rapidly growing industry for various types of raw materials cannot be satisfied by the relatively limited reserves of natural products. This is why organic synthesis has been developed so extensively, especially in the field of high molecule chemistry. This is a basic source for obtaining artificial fibers, synthetic rubber, artificial resin and plastics, the production of which is based mainly on the processing of various widely available fuels and especially oil and natural gasses. Our resources of the latter are truly enormous. In 1958 more than 9,000,000,000 cubic meters of petroleum gasses, which are an exceptionally valuable raw material, will be brought from the depths at our oil deposits. From this quantity of gas it is possible to produce about 400,000 tons of polyethylene or about 1.5 times more than was produced in the USA in 1957 or more than four times the amount produced in Britain and West Germany combined, and more than 500,000 tons of synthetic rubber. During the next 15 years it is planned to increase the extraction of oil 3.5 to four times and the extraction of natural gas 13 to 15 times. Our country is the first in the world in the potential reserves of oil and natural gas. This is the raw material base for a new and most important branch of industry—that of petroleum chemistry.

The economic importance of the petroleum chemistry industry is hard to overestimate. At the present time it is possible to obtain about 500,000 compounds from oil and natural gasses and this number is continually increasing. Three thousand petroleum chemical compounds are now being produced in industrial quantities and about 1000 compounds are being loaded into tank cars. The petroleum chemistry industry is becoming a basic supplier of basic semi-finished products for the production of synthetic rubbers, plastics, artificial and synthetic fibers, lacquers and paints, synthetic wetting agents, chemical poisons and other synthetic materials, whose production level determines to a considerable degree the state of a country's entire chemical industry.

The expansion of the raw materials base by the use of available and cheap basic types of raw materials is of great importance for the correct distribution of productive forces. For example, due to the wide distribution of underground fuel deposits, the specific bases for the development of the organic synthesis industry in all the country's economic regions are present. Oil and natural gas can be used in some regions as a raw material while products of coal, peat and oil-shale processing or waste from the woodworking industry can be used in others. The introduction of chemical processing methods assures integrated and the most rational use of raw materials and this presents great opportunities for the further increase in labor productivity.

The level of utilization of many basic types of raw materials including the use of by-products and production wastes determines to a considerable extent the degree of the introduction of chemical methods of processing them [the by-products and wastes]. Wastes in the form of gasses from oil refineries, which would have been used only as fuel 20 or 25 years ago, are now highly valuable raw materials. The demand for these "wastes" has increased immeasurably but it is by no means always satisfied. In a number of economic regions it would be advisable to begin the construction of oil refineries, which would be specially equipped to supply raw materials to the chemical industry.

The integrated use of raw materials achieved under the broad application of chemical processing methods is the basis for the development of one of the highest forms of the organization of socialist industry — the formation of combines. The formation of combines is the typical form of the development of the chemical industry.

Chemical production with its considerable number of various processes and products requires many different types of raw materials, which are often either received without any real preparatory processing or are received directly from the enterprises of the extracting industry or are received as by-products from one of the processing industries.

A characteristic of many branches of the chemical industry and especially organic production is that the same chemical product can be obtained from various types of raw materials (for example, ethyl alcohol, which comes from either food products, wood or oil refinery gasses, etc.). The same chemical raw material can serve as the basic substance for the production of many chemical products (from natural gas it is possible to obtain ethyl alcohol, various rubbers, plastics, artificial and synthetic fibers, solvents, etc.). This makes it possible to choose the most economical types of raw materials, the most efficient technological system for processing them for the specific production conditions of a particular chemical product.

Quite often the very chemical processing of particular types of raw materials is characterized by a very high economic efficiency. For example, the use of hydrocarbon gasses for production regions with limited hydrocarbon raw material resources is economically more efficient than their use for public and power needs in spite of the great saving in funds achieved in the latter case as compared with the satisfaction of these needs with artificial gasses obtained from solid fuel.

From the point of view of the national economy it is in many cases more efficient economically to satisfy public needs with artificial gas than to develop the production of chemical production on the basis of solid fuel and to use the hydrocarbon gasses for public utilities. If hydrocarbon raw material resources are limited the first thing that it is necessary to do is to satisfy the needs of the chemical industry. On the one hand this stems from the qualitative features, chemical make-up and structure of the hydrocarbons, which make for a simpler synthesis of chemical products from them than from solid fuel, and on the other hand with a practically identical power and economic effect achieved when either artificial gas or hydrocarbons are burned in public utilities installations. The production of chemical products from solid fuel is technically much more complex and expensive than it is to produce them from hydrocarbon gasses, which, for many syntheses, are practically in the form of usable semifinished products. This makes possible sharp reductions in capital and operating expenditures in the organization of such production.

The introduction of chemistry into the national economy plays an exceptionally important role in the maximal satisfaction of the continuously growing material and cultural demands of the working people. The chemical industry, an important branch of heavy industry, produces numerous article not important for production but used for the personal consumption of the population and for making consumer goods (rubber footwear, artificial fabrics, etc.). In addition, a considerable number of the products of chemical synthesis and chemical production methods are widely used in branches of industry whose development is directly connected with increasing the material well-being and cultural level of the people. The growth of branches of the food industry—sugar, fats and oils, alcohol and others—is also based in great part on the broad use of chemical substances and chemical methods for processing the basic raw materials. For example, the use of ion exchange resins for cleaning sugar solutions makes it possible to increase sugar output 10% to 12% from the same quantity of sugar beets and to obtain several million additional poods of sugar per year.

In the system of measures for accelerating the rise in socialist agriculture and increasing the yield of agricultural crops the further extension of the introduction of chemistry into farming and the supply of chemical products to all branches of agriculture and the intensive use of chemical methods in agricultural production are of great importance to the state. The chemical industry supplies agriculture with various fertilizers; highly effective chemical means for fighting pests and plant diseases, which are an important factor in increasing the yield of agricultural crops; chemical preparations for fighting weeds, which many times reduce the labor expenditures for weeding—one of the most arduous agricultural operations; chemical substances for removing leaves from the cotton plant in order to make the mechanization of cotton harvesting easier, etc. If farming rules are observed cotton yield increases 2.5 times after the application of fertilizer. Sugar beet yield increases two times and winter wheat yield increases by almost 80%.

The use of chemical poisons is economically effective. Harvest losses can be sharply reduced by the timely use of chemical poisons. For example, grain and cotton crop losses can be reduced 10%, vegetable losses 20%, and fruit losses 40%. The use of chemical poisons significantly increases labor productivity in agriculture. For example, the hand weeding of one hectare under crops requires more than ten working days while, if aerial dusting with chemical poisons is carried out, the weeds can be destroyed on 200 hectares in one working day. If farming rules are observed each ruble spent for chemicals assures the following harvest increases: grain crops, sugar beets and vegetables, five to 10 rubles; cotton, industrial and berry crops, 15 to 30 rubles and citrus crops, 40 to 70 rubles. The broad use of chemical products and chemical processing methods in agriculture is, along with mechanization, the main path toward technical progress in modern farming.

Chemistry and the chemical industry have a great role to play in increasing the resources of food products by reducing and later stopping altogether the use of food products for industrial purposes. It is known that among the largest consumers of food products for industrial purposes are heavy industry and transportation. Animal and vegetable oils are used in great quantities for making special lubricating oils. Vegetable oils are used to make paint mediums and soap and are used in foundry production (oil binding agents, flotation reagents, foam materials, etc.). Hundreds of thousands of tons of animal fats are used annually to produce soap, wetting agents, paint mediums, lubricants and other industrial products. Up to now wheat flour has been used to make acetone butyl alcohol. Enormous quantities of potatoes and grain are required to make ethyl alcohol. A large part of the latter is used as a raw material in the production of synthetic rubber and in the paint, lacquer and perfume industries. In 1957 alone more than 1,700,000 tons of edible raw material in the form of grain was expended to make ethyl alcohol. If this grain had been used to fatten livestock it would have been possible to obtain 350,000 additional tons of meat. The use of 520 kg. of synthetic fatty acid to produce one ton of household soap releases 560 kg. of edible vegetable oil and the use of one ton of sulphanol wetting agent releases almost the same amount of edible fats. The carrying out of the program for the production of fat substitutes and synthetic wetting agents planned by the Party will make it possible to release at least 400,000 tons of vegetable oils in 1965.

The chemical industry is of great importance in organizing Soviet public health, which has at its disposal numerous chemically synthesized therapeutic preparations.

A rise in the chemical industry and in the introduction of chemistry into the national economy of the country is an important factor in the successful development of all paths toward technical progress.

A change in the rate of development of one of the branches of the national economy affects the scale of production in many other branches. Technical progress in one branch of production poses the need for technical re-equipment in other branches. Machine building is based on the broad use of chemical products—plastics, rubber, artificial and synthetic fibers—or on the production of other branches of industry manufactured with chemical production methods. In machine building such methods of chemical technology as the chemical working of parts and the application of coatings to them are used on a large scale. The mechanization and the introduction of automation into production processes is unthinkable without the use of rubber, high-quality motor fuels, lubricating oils, special types of plastics, lacquers and other chemical products.

The rapid development of the chemical industry is a powerful factor in the technical progress of the entire national economy. This branch of industry produces various means of production and supplies the articles necessary to make the tools used in branches of heavy industry. Ninety per cent of all the products of chemical enterprises, which were formerly under the Ministry of the Chemical Industry, are means of production (group A). More than 60% of these chemical products are used in heavy industry. The proportion of some types of chemical products intended for heavy industry is still higher. For example, about 75% of the production of plastics, synthetic resins and articles made from them (we are here considering only means of production) are intended for heavy industry, of which 50% are for the machine building industry (including the electrical and radio equipment industry). More than 60% of chemical products in the form of chemical materials, parts and articles made of rubber and asbestos are intended for machine building and for the servicing of existing vehicles and equipment.

Thus, the rate of the development of the chemical industry must correspond to the rates of development of other branches of heavy industry and with that of machine building above all. In connection with the growing use of chemical materials and products in various branches of the national economy, including machine building and the construction industry, brought about by the need for technical progress and the need for economic efficiency in corresponding industries and especially in connection with the rapid development of the production of synthetic materials and articles made from them to satisfy the demands of the population, the chemical industry must develop at an accelerated rate. The Party and the government have taken into account the enormous economic importance of introducing chemistry into the national economy and have taken steps to assure the rapid development of the domestic chemical industry. The role of the chemical industry in the development of the country's national economy was many times emphasized in the decisions of the Party congresses and conferences, in a number of Party and government resolutions and especially at the 20th Party Congress.

During the years of Soviet rule, mighty chemical combines equipped with modern machinery, planned and prepared to develop one of the world's largest raw materials bases have been built in our country; a domestic chemical machine-building industry has been created; highly-skilled cadres of workers, technicians and engineers have been trained and they are capable of improving and developing new machinery and technology for chemical production. By 1957 the total production of the chemical industry had increased 112 times as compared with 1913. The rate of growth of the chemical industry in our country is higher than that in industrially developed capitalist countries. Between 1937 and 1936 the output of chemical products in the USSR increased seven times. In the USA it increased 4.1 times; in Britain, three times; France 2.3 times and in West Germany 2.1 times. At the present time the USSR is in first place in Europe and in second place in the world after the USA in the volume of the production of chemical products. But the rate of increase and the scale of production of individual chemical products and the industry as a whole are still not satisfying the growing demands for chemical products. This determines the need for an accelerated development of our chemical industry. In this connection, an analysis of the rates of growth and a comparison with the rates of growth in other branches of industry, especially the machine-building industry, and also with the rates of development of industrial production as a whole are of interest (see table next page).

As we see, the total output of the chemical industry (including the chemical mining industry) increased about 7.15 times during the prewar and postwar five-year plans. This is considerably higher than the increase in the total production of all industry. While from 1913 to 1955 the total production of all industry increased 27 times and the production of the means of production increased 60 times, the

The development of industrial production of the USSR
(in percentages of the 1913 level)

	1928	1932	1937	1940	1945	1950	1955
Total industrial production	132	267	588	852	782	1476	2729
Production of the means of production (group A)	155	424	1013	1554	1744	3185	6054
Total production of the chemical industry (including chemical mining)	146	460	1528	2461	2413	4500	10,243
Total production of machine building and metal-work industries	175	699	1977	3473	4474	7451	16,183

total production of the chemical industry increased 102 times. However, it should be taken into account that our country's chemical industry was less developed in comparison with other branches of heavy industry during the period of the prewar five-year plans. The comparison of rates of development in the chemical industry compared with rates of development in machine building shows that the growth of the chemical industry lags behind that of the machine-building industry. For example, the rate of growth of machine building and metal working, whose total production increased 160 times between 1913 and 1955, was 1.6 times greater than that of the chemical industry. These conclusions are confirmed by the following information on the development of production in the USSR (in percentages):

	1928	1932	1937	1940	1945	1950	1955
Total production of all industry	100	202	446	646	593	1119	2069
				100	92	173	320
						100	185
Production of the means of production (group A)	100	273	652	1000	1122	2049	3895
				100	112	205	390
						100	191
Total production of the chemical industry (including chemical mining)	100	315	1048	1687	1654	3084	7020
				100	98	183	416
						100	228
Rubber and asbestos industry				100	57	229	426
						100	186
Total production of machine-building and metalworking industries...	100	399	1128	1982	2553	4252	9235
				100	129	215	466
						100	220
of which the proportion of machine building was				100	131	234	571
						100	243

The chemical industry's lag is still more distinct when it is compared with the machine-building industry alone (not including metal-working). For example, from 1940 to 1955, the rate of increase of total machine-building production was 37% higher than the rate of chemical production growth.

A more rapid increase in the total production output of the chemical industry is characteristic of the prewar period. During the First and Second Five-Year Plans, the output of the chemical industry increased 10.45 times but during the Fourth and Fifth Five-Year Plans it only increased 4.25 times. This is illustrated by the following figures:

	1928-32	1932-37	1945-50	1950-55
Number of times by which total output of chemical industry increased	3.15	3.32	1.86	2.28

One may arrive at the same conclusion by considering the change of the proportion of the total output of the chemical industry in the total production of all industry. Since 1940, machine building and metalworking have had the largest proportion of total output while light industry, for example, moved from third to second place in 1955 and ferrous metallurgy (including ore extraction) went from sixth to fifth and the fuel industry went from fifth to fourth. At the same time the chemical industry (including chemical mining) moved from fourth place to sixth place.

At the same time the chemical industry was playing a greater and greater role in the economy of the capitalist countries, which is advanced from the technological point of view, and the rate of its development was higher than the rates of development in other branches of heavy industry including machine building. This may be illustrated by the following figures:

	1937	1950	1951	1952	1953	1954	1955
USA (1947-49 = 100)							
Over-all index	61	112	120	124	134	125	139
Ferrous metallurgy	60	114	129	115	133	105	140
Machine building	54	114	130	147	160	142	155
Chemical industry	51	121	136	137	147	148	167
Britain (1948 = 100)							
Over-all index	93	114	117	114	121	130	136
Ferrous metallurgy	85	109	113	117	118	125	135
Machine building, shipbuilding, electrical equipment industry	73	116	127	127	129	140	157
Chemical industry	62	124	134	132	151	166	180
France (1938 = 100)							
Over-all index		123	138	144	140	152	167
Metallurgy		139	160	177	163	172	206
Metalworking		131	149	173	157	172	198
Chemical industry		135	152	146	154	178	200
Italy (1938 = 100)							
Over-all index		126	145	150	165	181	196
Metallurgy		105	135	150	149	173	218
Metalworking		130	142	154	170	176	193
Chemical industry		139	183	184	225	278	316

It follows from the figures in this table that the chemical industry in the capitalist countries is growing considerably faster than the machine-building industry. A study of foreign economy shows that while there are reduced rates in the growth of industrial production as a whole or even net reductions, the output of a number of branches of the chemical industry continues to increase.

An important increase in the output of the petroleum chemistry industry is especially characteristic of the USA.

This industry is the main basis for the development of the production of synthetic materials and the fundamental capital rose from $350,000,000 in 1940 to $4,000,000,000 in 1955. About 50% of all the capital investments in the chemical industry are investments in the American petroleum chemistry industry. The production of petroleum chemical products in the USA is more than 15,000,000 tons per year, or 25% of the total production of chemicals. If one compares the output of chemicals not by weight but by cost, the proportion of petroleum chemistry products will be considerably higher (about 55%). During the last 25 years the annual rate of growth of the US petroleum chemistry industry was 14%. The growth rate of the chemical industry as a whole as 10% and that of this country's entire industry — less than 3%.

An analysis of the structure of the fixed industrial production funds of USSR industry by branches also testifies to the lag in our chemical industry. The growth of fixed industrial production funds was accompanied by a significant change in their distribution among branches of industry. The proportion of the more important branches of heavy industry in the total amount of fixed industrial production funds in the USSR has increased. While 8.2% of fixed industrial production funds were in ferrous metallurgy (including ore extraction) in 1933, the 1955 proportion was 8.6%. The share of non-ferrous metallurgy (including ore extraction) correspondingly increased from 2.5% to 5.6%, fuel industry's share from 11.3% to 18.4%, oil industry's share from 4.8% to 7.1%, and so on. The share of machine building and metalworking industries in the fixed industrial production funds remained at the former high level of 23.9%.

Another picture is to be observed in the chemical industry. While this industry's proportion of the fixed industrial production funds (including that of chemical mining) increased from 6.1% to 6.9% between 1933 and 1940, it actually decreased to 4.9% during the Fourth and Fifth Five-Year Plans or by almost one third. The proportion of fixed funds in the rubber and asbestos industry decreased from 0.6% to 0.4%, or by 33.3%, between 1933 and 1955. An analysis of the rate of growth of fixed industrial production funds, between 1932 and 1955, for example, shows that although the proportion of fixed funds in the machine-building and metalworking industries remained at the former level, the fixed funds in machine building and metalworking increased 8.4 times in absolute terms during this period (assuming that the structure was the same for 1932 and 1955) but the fixed funds of the chemical industry increased (by the same calculation) less than seven times.

In a report to the May plenary session of the Party Central Committee, Comrade N. S. Khrushchev pointed out that the planning agencies and the Ministry of the Chemical Industry had not made enough capital investments in the development of new branches of the chemical industry. In addition, these capital investments were not being developed satisfactorily. The funds released by the state were scattered over many construction projects of which the completion dates for the construction were many years away. In noting the growing role of the chemical industry in the development of production forces it is necessary to point out that the lag in the chemical industry has a quite negative effect on technical progress of important branches of the national economy and leads to a worsening of the economic indicators of their operations. It is known that if there is a shortage of the plastics used as structural material, a corresponding quantity of expensive nonferrous metals is expended and this does great harm to the national economy.

When the rate of development in the chemical industry, and especially in its leading branches, is not sufficiently high, it is possible to overlook these losses because the same types of apparatus or machinery will be produced without cheap chemical materials. Excess capital and operating expenditures will be made by those branches of industry, for which these supplementary funds had been provided beforehand in finance plans that had been included, for example, in the planned cost of production.

The resolution of the May plenary session of the Party Central Committee calls for accelerated development of the chemical industry and especially for an increase in the production of artificial synthetic fibers, plastics and other synthetic products and articles made from them. It is planned to increase the production of the more important chemical products between 1959 and 1965 at least two to three times and to increase the production of artificial and synthetic fibers 4.5 to eight times. In order to accomplish this task between 1958 and 1965, we will have to build or reconstruct 257 enterprises in the chemical industry and adjacent branches of industry. This includes the completion of the construction of 37 enterprises that has already been begun, the construction and opening of 120 new enterprises and the expansion of 100 existing enterprises. For the construction and expansion of these plants and enterprises to produce equipment for them and also to carry out measures for increasing experimental work 100,000,000,000 rubles in funds for capital construction will be appropriated. A considerable amount of these funds will be obtained by redistributing capital investments and also due to the fact that many branches of the chemical industry and production, whose development must be carried out at an accelerated rate, pay for themselves rapidly.

The Central Committee of our Party and the Soviet government consider the construction of chemical industry enterprises as an important state task of the first order and to fulfill it, it is necessary to mobilize all the necessary forces and material resources. The accelerated development of the chemical industry must become a nationwide cause.

A. Lyando:

Methodological Problems of the USSR Financial Balance

The planned nature of the circulation of money, and the unified character of the financial and credit system of the USSR — the finances of enterprises and of branches of the socialist economy — create objective conditions for regular compilation of an overall financial balance of the national economy of the USSR on the basis of the plans of the institutions for financing and credits, the financial plans of the branches engaged in production of goods, and the estimates of non-productive institutions. The method of compiling such a financial balance has had inadequate elaboration as yet.

In accordance with the method adopted by the Central Statistical Administration of the USSR, the national economic balance consists of three parts: 1) the material balance for reproduction representing production and distribution of the social product; 2) the balance reflecting the production and primary distribution and redistribution of the social product and the national income, and its ultimate use for consumption and accumulation; 3) the balance of labor resources.

The second part of the balance of the national economy is often termed the financial balance in our economic statistics. It provides a characterization of expanded socialist reproduction from the viewpoint of the sources and methods of formation of the incomes of enterprises, organizations and the population, and indicates the final utilization of the social product and the national income. This section also characterizes socialist relations of production as they are expressed in the relationships of distribution and redistribution. However, this part of the balance for the national economy cannot be designated a financial balance in the strict sense of the term, as it embraces not only financial but natural relationships, and does not provide a characterization of the concrete forms of financial relationships between branches of the socialist economy — the economic councils, the enterprises and the collective farms on the one hand — and the system of financing credit on the other.

The experience accumulated in economic and financial planning shows that the need has developed to elaborate a financial balance that would reflect the relationships of the financial resources of the state, of state and cooperative enterprises and organizations, and also of non-producing institutions; and the expenses thereof. The absence of balance between financial resources and the planned expenditures may have negative results. Thus, if the financial resources in some branch of the economy are greater than the expenditures envisaged, government funds lie idle and the speed at which expanded reproduction occurs is slow. On the other hand, an inadequacy of financial resources to cover necessary disbursements leads to dispersion of capital investment, interruption in supplies of materials and technical aid, etc.

An analysis of the essential nature of the finances of the USSR as an economic category yields the initial postulates required to elaborate methods of compiling the financial balance of the USSR. Soviet finances constitute an aggregate of monetary relationships primarily in the distribution and redistribution of national income. In accordance therewith, the established forms for the financial plans of economic councils, the income and expenditure estimates of collective farms, and the estimates of social and cultural institutions, reflect only the movement of monetary funds. The natural portion of the collective farm income is not reflected in its estimate.

The specific nature of finances as a form of value lies in the fact that it reflects the movement of monetary funds. Therefore, in developing a financial balance for the national economy of the USSR it is necessary to proceed from the need to describe that totality of financial relationship which is reflected in the form of financial plans of socialist enterprises, the estimates of offices and organizations, and the plans of financing and credit in the USSR established by the government. Thus, the financial balance of the USSR must embrace the totality of finances of socialist enterprises, both state and cooperative. However, it should not include the income and expenditures of individual citizens (budgets of workers, white collar people and collective farmers) inasmuch as they do not move through institutions of finance and credit, and are not received from these units. Likewise, the financial relationships of specific groups of the population (the turnover of collective farm trade) is outside the bounds of financial relationships and constitute merely a portion of the relationships of finance and value in the national economy of the USSR.

Although the scope and the content of the financial relationships embracing the general finances of the government as a whole, and the finances of socialist enterprises do not completely coincide, this should not be permitted to obstruct the unifcation of these and other finances in a summary financial balance of the national economy. It is necessary to find the common factors that unite overall government finances and the finances of government enterprises and government collective farm and cooperative organizations into a single whole. Such factors are represented by the relationships of distribution and redistribution of accumulated funds and of income realized with the aid of finance.

In socialist society, the financial and economic relationships make it possible to reduce to a common summary balance not only the finances of the state as a whole and the finances of government enterprises, but the finances of the collective farms as well. Therefore, in our opinion, the financial balance of the USSR has to reflect not only government finances but the finances of the collective farms and the cooperative organizations. It also seems desirable to include in the financial balance the incomes and expenses of the voluntary membership organizations such as the trade unions. The dues paid by working people to these organizations are a portion of their income, and are used primarily to meet the social, cultural and daily ving needs of the members of the trade unions. Inclusion these needs in the financial balance expands the domain financial planning, and permits a more complete deterination of the resources directed to raising the living andard of the people. The financial balance should also clude insurance funds, as insurance is a means used to ing about redistribution of a portion of the incomes of llective farms and cooperatives and of the population.

The question of the reflection of credit relationships in e financial balance is a very important one. Credit and nancial relationships differ from each other very substanally in the national economy. To ignore these relationships to undermine the foundations of accounting. This is borne tness to by the errors committed in the Credit Reform of 30. However, despite the specific nature of credit, the ans of the credit organizations should, in our opinion, included in the financial balance of the USSR. The credit stem is intimately related to the financial system and, a number of instances, exercises a decisive influence on e conditions of enterprises in organizations. It is of desive significance to the planning and regulation of the rculation of money.

Credit plans may be included in the balance of the fiances and credit of the USSR only in terms of their interelation with the state budget, or in the overall summary income and expenditures. In the former instance, the verall financial and credit balance will reflect only the ansmission of funds from the government budget to the ate Bank and other banks to build up their resources. he annual increase in budgetary funds carried on the books the State Bank, is reflected in the financial and credit alance. However, the expanded reflection of credit relaonships in the balance should indicate, on the income side, e influx of credit resources in the accounts of banks and, the expenditure side, the rise in loans issued by credit stitutions to socialist enterprises and organizations.

It is our opinion that the second method, the method of xtended reflection of credit relationships, is the more apropriate. This method will provide a more complete acunting of the money of financial and credit resources in e national economy.

The financial balance of the USSR national economy is pable of reflecting statistically an even broader area of lationships. But its collaboration in such case would not st on the financial plans in actual operation. I. Malyshev, his article "The Role of the National Economic Balance der the New Conditions of Planning," published in Numr 6 of the magazine Kommunist for 1958, proposes that e financial balance of the national economy of the USSR ow all monetary income, both primary, i.e. those formed the basis of the manufacture of material goods, and condary, those obtained as a result of redistribution. hile the expenditure side should reflect the results of penditures for wages (in the collective farms, monetary tlay in accordance with work days), and for the acquision of material goods, with individual entries for expenses purchasing goods for the current needs of production, the acquisition of materials and equipment for capital pansion, and also for production for unproductive conmption.

No objection can be raised in principle to this model for inancial balance. However, in our opinion, the model the financial balance should be limited to a narrower oup of indices at the stage of compilation of the annual ional economic plan, and for purposes of elaborating long-term plan. These should be indices covered in the ms for the income and expenditure balance of enterprises economic councils. We know that these balances do not indicate, for example, the fund for replacing expenses by the enterprise, expenses for wages, for acquiring materials, and so on. Nor is there a separate indication of expenses for the acquisition of materials for current production and for capital construction. Work to render the plans more concrete is usually conducted after the national economic plan and the government budget have been approved by the government.

In examining the plans of production and finance of the economic councils, and the budgets of the Union Republics, these plans and budgets are usually rendered more precise and somewhat amended. Therefore, introduction into the financial balance of all the indices suggested by Comrade Malyshev would significantly complicate the entire process of operative financial planning.

It would be desirable that the financial balance of the USSR reflect only that totality of profits and accumulations of funds for amortization, and of certain other analogous forms of income which the socialist enterprises and organizations, including the collective farms, will have at their disposal during the envisaged plan period.

The expenditure side should reflect expenses for expanded production (capital investment and funds made over to circulating capital), and the maintenance of non-productive organizations, as well as the formation of reserves.

Practical experience in financial planning has demonstrated the inadvisability of providing reflection in the financial plans of a fund for repayment of expenditures and of wages, and also of all gains from the realization of production. In the forms for financial plans authorized in 1930, expenditures for production were not provided for. In 1939, the so-called balances of income and expenditures of enterprises, chief administrations, and ministries, were introduced, which envisaged entry into the income side of gains by realization of production and, on the expenditure side, of expenditures on production. However, in 1958, financial plans again began to be compiled essentially on the basis of the scope of the indices of 1930; something that is, in our opinion, completely correct, as it is undesirable to expand excessively the number of indices in the financial plans.(1)

It appears desirable to us, that, out of the totality of expenditures on production, those expenditures should be specified that come from the net income of society (expenditures for social insurance, for scientific research work, for personnel training included in the costs of production, and certain others).

To provide financially for expenditures specified in the national economic plan for expanded reproduction of fixed and rotating funds, social and cultural appropriations, defense, maintenance of the organs of administration, and formation of reserves, the financial balance of the USSR need specify only the following: profits; the turnover tax; accumulations of incomes of collective farms and other cooperative organizations; funds set aside for amortization and insurance; the incomes of the field and tractor stations; means drawn from the population in the form of taxation and otherwise; and certain other forms of income.(2)

The model we propose for the financial balance rests primarily on the method of compiling financial plans for economic councils, for branches of the economy, and for social and cultural institutions already in existence. And therefore the elaboration of such a balance would not involve any significant difficulties for the planning, financial and statistical institutions.

The financial balance should reflect: 1) financial resources at the disposal of the socialist state, of state and collective-cooperatives, and also of voluntary membership organizations, regardless of whether these resources enter the system of financing and credit, or whether they are retained for direct employment by the enterprises and organizations, the collective farms and the other membership organizations; 2) the totality of expenditures by the government, by government and cooperative enterprises and membership organizations, regardless of the source of the money (the budget, credit or special funds, and the funds of enterprises, offices and organizations); 3) the interrelationship between the finances of government and cooperative enterprises and organizations on the one hand, and of the institutions of financing and credit on the other, particularly as this relates to the national budget and the banks, both in the field of payments and in the acquisition of means (i.e., the accounting relationships between economic organs and institutions of financing and credit will be shown as a balance); 4) the relationship between the resources and the expenditures, and conditions of balancing of the system of finances and credit of the USSR as a whole, and Republic by Union Republic; 5) financial interrelations with the Union Republics.

Such a financial balance would not pose the problem of revealing the processes of primary distribution and ultimate utilization of the social product and the national income. But it would be capable of revealing the processes of redistribution of a considerable portion of the national income via the institutions of financing and credit. The elaboration of such a financial plan and balance would be of definite assistance also in that portion of the balance of the national economy that embraces the distribution and redistribution of the social product and the national income, and its ultimate employment for consumption and accumulation. Thus, the scheme for a financial balance we suggest has the purpose of serving as a supplement to the second segment of the balance of the USSR national economy.

Summary total data in the financial balance are of high economic significance. If, for example, it is established that expenses in the financial balance exceed the volume of financial resources on hand, this will mean that it is necessary to seek additional means or to re-examine the planning of expenditures in the financial plans. This would make it possible to determine which of the operative financial plans reveal a shortage of funds. If the accounts of the unified financial balance of the USSR national economy show an excess of income over outlay, this would establish the additional funds available to the government in monetary terms for further increase in payments to, and advantages to, the population (pensions, social assistance, etc.), for price reduction, for expanding the sphere of the cultural services, for additional capital investment, and increase in the reserves and resources. Currently such a surplus is provided for primarily through the means of the national budget. In compiling a financial balance, it may be established on the basis of the plan for the system of financing and credit as a whole. This will facilitate the work of coordination of the budgetary, the credit and other plans of financial nature.

A financial balance for the country as a whole will also make it possible to determine whether additional printing of money is required, or whether, on the other hand, money should be withdrawn from the channels of circulation. The results of the overall financial balance should be coordinated with the calculations made in terms of the balance of income and expenditures of the population itself. This will make possible the mutual monitoring of calculations in terms of the overall financial balance, and in terms of the balance of income and expenditure of the population.

The errors of the past period should be avoided in the practical employment of the financial balance of the USSR. We know that in May 1930, the Central Executive Committee and the Council of Peoples' Commissars of the USSR adopted a law establishing a unified financial plan. It noted that the successes attained in the national economy made it possible and necessary to encompass the finances of the socialized sector in a unified financial plan which, while not eliminating the individual operative financial plans (national budgets, the financial plan for industry, plans of credit, etc.), should facilitate and improve the coordinatio thereof, and make for more purposeful direction and superior economic employment of available funds for the needs of the national economy, culture, administration and defense. In practice, however, the financial plan (balance) was also given the function and significance of a national budget. The financial balance compiled by the Peoples' Commissariat of Finance came to be subject to approval by the government. In the RSFSR, there was begun an elaboration of territorial summary financial balances for indices including all the enterprises of the economy, regardless of their line of control, i.e., unionwide, republicwide or local. This all led, in practice, to a distortion of financial work, to substitution of the overall financial balance for the national budget; and it undermined the foundations of accounting, weakened the adherence to discipline of economic organizations, as far as finances and budget were concerned, and reduced their responsibility for the fulfillment of the qualitative indices of the plan. In the course of the elimination of the distortions in financial planning, the practice of elaborating a summary financial balance in the Peoples' Commissariat of Finances, and its presentation to the Council of Peoples' Commissars, was done away with. At the same time, financial planning branch-by-branch was not only retained, but further developed.

It must be emphasized that the financial balance of the USSR must not replace the national budget and other operative financial plans. The national budget of the USSR is the fundamental financial plan of the government, approved by the Supreme Soviet of the USSR. The overall financial balance of the USSR, however, should not require the approval of the Supreme Soviet of the USSR. The national budget performs a number of specific functions, and fulfills certain tasks that do not pertain to the national balance. It clearly differentiates the funds of the government as a whole from those of the individual organization subject to maintaining its own accounts. And this creates the conditions for "control by the ruble" over the financial and economic activity of the various enterprises. Substitution of the financial balance of the USSR national economy for the state budget would mean, in essence, elimination of the distinction between the finances of the enterprises and those of the government as a whole; and this would undermine accounting.

The financial balance of the USSR should not replace such operative plans as the plans for long-term and short-term credit, the financial plans of the savings offices of the national insurance organizations and of social insuranc or the financial plans of a branch of the economy, etc. The main object of the financial balance of the USSR is the coordination of the financial and credit plans listed above.

Compilation of a financial balance for the USSR has the purpose of facilitating more accurate discovery of the proportions required in the fields of production and of unproductive institutions, and also of the branches of the econom and of social and cultural efforts. This will have a positiv effect in terms of the elaboration of the national budgets. The overall national balance of the USSR will make possib a more complete determination of the motion of and utiliza on of financial resources, compilation of a plan for financ- g capital investments from a broader range of sources, termination of the overall increase in material resources ssessed by the organs of the economy, and will make for better coordination of financial plans with plans for supply materials and capital goods. The financial balance should rve as one of the major means of mutual coordination of e activity of the enterprises united under the respective onomic councils, and the enterprises under local control. his will be of high importance in determining the correct nancial relationships with the Union Republics. The over- l financial balance will make it possible to determine more rrectly what portion of the expenditures by the Republic ll be covered by its own funds, and what portion requires ssistance from state funds or, contrariwise, what portion the funds of the Republic should be transferred to meet nion-wide needs.

The financial balance of the USSR constitutes a synthe- zed financial plan comprising two major parts: income d expenditure. The former should reflect the totality of cumulations and incomes at the disposal of enterprises, embership organizations, and contributions by the popula- on to the financial and credit system. The second portion ould reflect the totality of investments and expenditures r the expansion of production, expenditures for social d cultural services, for national defense, for administra- on, and the formation of reserves; and also payments to e population from the system of financing and credit, as ell as certain other expenditures.

The overall tables of financial balance should distinguish tween publicly-owned and cooperative enterprises.

In its structure by branch of industry, the overall finan- al balance sheet should be organized on the unified classi- cation of branches developed by the State Planning Com- ission of the USSR and the Central Statistical Administra- on of the USSR. The financial balance should embrace dustry, agriculture, commerce, and government purchas- g, supply and sales organization, transport, construction, cial, cultural and urban services and administration, d should separately identify enterprises under economic uncils. The expenditure side should identify the sphere production of tangible goods, non-productive enterprises, d also the means going to formation of reserves. If ese conditions are adhered to, the financial balance will sist in better determination of the proportions between e portions of the national income to be accumulated and be used in elaborating the corresponding portion of the tional economic balance.

In the expenditure side of the financial balance which we e discussing, funds going to capital investment, to geo- gical prospecting, to increase in rotating capital, to allo- tions to insurance and other funds should be indicated, well as the funds at the disposal of financial and credit stitutions, and other sources out of which expenditures e met. It will reflect all kinds of special resources and nds by which various undertakings are advanced. The nction of these funds has been significantly increased in nnection with the expansion of the rights of the Union publics in the area of the budgets and financing, and also a result of the organization of the economic councils.

A reflection in the financial balance of relationship with systems of financing and credit, will indicate the role reof in redistribution of income, and in meeting the ed for funds, and will also make it possible to discover degree of the liquidity of the funds present in the econ- y, and the conditions for making planned use of them.

The income side of the financial balance should indicate branches of the socialist economy in which the income has been realized, and also the contributions of the population, in the form of taxation or otherwise, to the system of financing and credits, and to voluntary membership societies.

In view of the difference between prices and value, the magnitude of national income for use in various branches of the economy does not correspond to the realization of national income by any given branch. It appears to us that inasmuch as the branch-wide financial plans currently reflect income from realized production, the total financial balance should show this income. If we attempted to show the income produced in the income side of a balance, this would complicate all calculations, and would cast doubt upon a number of important indices within the plan.

In the income side of the overall financial plan and balance now under discussion, it is necessary to indicate forms of distribution and redistribution of the national income, i.e., profit, turnover tax, contributions to social insurance, monetary income of the collective farms, and also the financial and credit institutions receiving portions of this income and accumulations. Only that portion of the gain for commodities representing newly-created value, i.e., national income, can serve as a source of income. On the other hand, that portion of the monetary gain from realization of commodities that goes to make good consumed means of production, is not a source of income, and cannot serve as a source for the formation of financial resources. Therefore, it is not advisable that it be shown in the financial plan (with the exception of amortization).

The resources section of the overall financial balance of the USSR should reveal the income from the national economy, the incomes of collective farm and cooperative organizations, and the funds obtained by the government from the population. The income from the socialist economy should reflect profits and the turnover tax, social insurance contributions, expenditures upon the training of personnel and for scientific research work, included in the cost of production; and also appropriations for amortization, increase in firm liabilities, gains from sale of properties, and certain others. The monetary income and accumulations of collective and cooperative organizations should reflect increase in the property of the collective farms themselves, including funds allocated to the indivisible funds of the collectives, monies set aside for advances to the collective farmers against their labor-day earnings, appropriations by the collective farms to set up rotating capital, as well as for cultural purposes, and payments for income tax, insurance, and other taxes and levies.

Capital investments should be shown in the total sum of expenditures for construction at the point where the work is done, regardless of whether the equipment was manufactured in the USSR or abroad.

An analogous method should be employed in defining expenditures for social and cultural needs, for maintenance of rest homes and sanitoria, for tourist activities and other forms of social and cultural services. In all these instances it is necessary to allow for the total sum of expenditures envisaged in the estimates of the respective institutions and organizations. The income derived from the population by the system of financing and credit should be calculated on the basis of data provided by the respective financial and credit organs.

In planning the income portion of the financial balance of the USSR, the question arises as to the determination of the portion of the turnover tax to be ascribed to the various branches of the economy. This problem has not received adequate study as yet. In our opinion, the turnover tax monies should not be allocated to the individual branches of industry, but should be shown in the summary total as a national source of income.

In compiling the national balance of the USSR, the basis to be employed should be comprised of the indices of the national economic plan, the financial plans of the economic councils and the branches of the economy, and also the estimates of income and expenditure of collective farms, of social and cultural institutions, and of voluntary membership organizations on one hand, and the plans of financial and crediting institutions on the other. The total financial balance of the USSR national economy should reflect the totality of monetary relationships embracing the national budget, credit, insurance organizations, the financing of government enterprises and organizations, the collective farms, the cooperatives and voluntary social organizations. It goes without saying that the financial balance should reflect only the increase in means of the various institutions of credit and insurance, and not the overall turnover of the resources of these institutions.

Credit appropriations should be written into the summary financial balance in accordance with data of the State Bank and other banks. Inasmuch as they are not identified in the financial plans of the various economic organizations, inclusion of credit relationships in the summary financial balance will expand the sphere of planning of finances and credits, and will make possible a more profound study of the processes of finance and economics proceeding in the national economy of the USSR.

In developing a pattern for the summary balance of finances and credits of the USSR, it is necessary to proceed from the extant operative financial and credit relationships between socialist enterprises and the state, the payments of the population established by the law, and the means received by the population from the system of financing and credits. Only to the degree that these change will the financial balance reflect new forms of financial relationships.

The overall tables show that the national balance of the USSR might have the following appearance.

Table I

Financial Balance of the USSR National Economy: Income

Coverage

Branches, enterprises, offices and organizations having independent financial plans and estimates.
I. Government enterprises and organizations
  1. Economic council industry
    a) heavy
    b) light
    c) food
  2. Industry subject to the local Soviets
    a) heavy
    b) light
    c) food
  3. Agriculture and forestry
    a) state farms
    b) repair and service stations and machine and tractor stations
    c) forestry
  4. Transportation and communication
    a) railways
    b) maritime and river
    c) communication
  5. Construction
  6. Geological prospecting organizations
  7. Commerce, government purchase, supply and sales
    a) government commerce
    b) government purchase organizations
    c) supply and sales organizations
    d) domestic commerce
  8. Urban service institutions
  9. Housing
  10. Other enterprises and economic organizations
  11. Special funds of social and cultural institutions
II. Collective farm and cooperative organizations
  a) collective farms
  b) producers cooperatives
  c) consumers cooperatives
III. Government institutions for credit and insurance
  a) the State Bank
  b) banks for long-term credit
  c) state saving offices for the working people
  d) financial insurance organizations
IV. Voluntary public societies
  a) trade unions
  b) all others
V. Taxes and levies
  a) the agricultural tax
  b) income tax
  c) taxes on unmarried persons, persons living alone and small families
  d) loan taxes and levies
  e) rural local options, special purpose taxes adopted by open vote at town meetings
VI. Government loan and savings bank funds
  a) government loans
  b) deposits and savings banks
VII. Other income
total income

Categories

I. Profits
II. Turnover tax
III. Appropriations to the social insurance fund and other insurance appropriations
IV. Income tax on the collective farms, producer and consumer cooperatives
V. Amortization
VI. Indivisible funds of the collective farms
VII. Contributions for cultural needs
VIII. Increase in stable liabilities
IX. Other means
Total
The above are payable to:
  a) the USSR budget
  b) the budget of the Republic
  c) the local budget
  d) the State Bank
  e) the Industrial Bank
  f) the Bank for Agriculture
  g) the Bank for the Communities
Transferable to other economic units.
Remaining at the disposit
of the enterprises of organizations.
Including the collective farms.

Table II

Financial Balance of the USSR National Economy: Expenditures

Subjects

I. Government enterprises and organizations
  1. Economic Council industry
    a) heavy
    b) light

Categories

I. Capital investments
II. Appropriations to rotati
funds
Including standardized fund
III. Appropriations for special funds

Subjects

c) food
2. Industry subject to local Soviets
a) heavy
b) light
c) food
3. Agriculture and forestry
a) state farms
b) repair and service stations and machine and tractor stations
c) forestry
4. Transportation and communication
a) railways
b) maritime and river
c) communications
5. Construction
6. Geological prospecting organizations
7. Commerce, government purchase, supply and sales
a) government commerce
b) government purchase organizations
c) supply and sales organizations
8. Urban service institutions
9. Housing
10. Other enterprises and economic organizations
II. Collective farm and cooperative organizations
a) collective farms
b) producers cooperatives
c) consumers cooperatives
I. Government institutions for credit and insurance
a) the State Bank
b) banks for long-term credit
c) state savings offices for the working people
d) financial insurance organizations
V. Offices and organizations maintained by the national budget
a) organs of administration
b) ministries of the Armed Forces, Ministry of Internal Affairs and Committee of State Security
c) educational institutions
d) public health institutions
e) social assistance institutions
V. Voluntary public membership societies
VI. Payments under government loans and other expenditures
Public expenditures
Reserve (surplus of income over expenditures)

Categories

IV. Expenditures for social and cultural purposes
a) education
b) public health
c) social assistance
V. Expenditures for administration
a) government organs
b) economic institutions
c) consumers cooperatives
d) collective farms
VI. Reserves
VII. Other expenditures
Total expenditures
Met from following sources:
a) national budget
b) budgets of Republics
c) local budgets
d) State Bank
e) long-term credit banks
f) funds made over by other organizations
g) funds remaining at disposal of economic organizations

The following should be appended to the overall financial balance: summary plan of capital investment specifying sources of financing; the summary plan for appropriations for rotating funds of economic organizations specifying the total circulating funds of these organizations and the sources of financing and credit; and also the summary plan for social and cultural measures. These and other plans should be most carefully coordinated with all the indices of the national economic plan for the territory covered by the plan.

Compilation of total financial balances should be conducted regularly, not only for the country as a whole, but for the individual Union Republics. Adequate experience in financial planning on a territorial scale already exists to do so. All that is required is to develop a special methodology for compilation of balances of this type.

FOOTNOTES

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1. Gains from the realization of production and the expenditures on production are shown in the balance for the total table of financial plans.

2. As long ago as the thirties, in the course of the elaboration of the first Five-Year Plan, discussion proceeded as to the scope of the overall financial balance of the USSR. As a result of this discussion there was developed a method for compiling it on the basis of a limited area of indices envisaged in the operative financial plans of economic institutions, peoples' commissariats, and the plans on institutions of finance and credit (see: "The Unified Financial Plan for 1929-1930," Gosfinizdat, 1930; M. I. Bogolepov, "Financial Plan for the Five-Year Plan" (1928-29 to 1932-33) Planovoe Khozyaistvo, 1929).

V. Trifonov:

Problems of the Industrial Development of the Chinese People's Republic During the First Five-Year Plan

The victory of the People's Revolution in China, and the founding of the Chinese Peoples' Republic, constitute the greatest historical event subsequent to the great October Revolution in Russia. During the eight-and-half years of existence of the peoples' power in the Chinese Peoples' Republic the country has changed to the point where it is no longer recognizable. Once industrially backward, agrarian, China today is successfully carrying out socialist industrialization, and an upsurge of the entire national economy is taking place. Thus the economic basis for its independence and progress is being established.

In old, semi-colonial agrarian China, modern industry represented only 10 per cent of the total volume of gross production of industry and agriculture combined. The production of the means of production represented only 28 per cent of the total gross industrial production. The major industrial enterprises — mines, railways, banks and the like, belonged to foreign monopolies or were under their control. For example in 1943, the share of foreign and comprador bureaucratic capital in the production of pig iron was 97.3 per cent; of steel, 99.8 per cent; of petroleum, 100 per cent. The industrial backwardness of old China is drastically indicated by the level of production per head of population. In 1936, the output per head of population was 7.9 kilowatt hours of electrical energy; 83 kilograms of coal, 1.7 kilograms of pig iron, 0.9 kilograms of steel; while, in England, for example, the output in 1937 per head of population was 675 kilowatt hours of electric power, 5,165 kilograms of coal; 183 kilograms of pig iron, and 279 kilograms of steel.

The war against the Japanese aggressors, and the long years of Civil War, brought the industrial production of old China, which had been backward anyhow, to a state of complete disorganization.

With the institution of the peoples' power in 1949, and the formation of the Chinese Peoples' Republic, restoration of industry became a first priority objective of the peoples' government. Socialism could not be developed in an economically and technically backward country, but required the essential material base in the form of large-scale machine-operated industry.

The foundation for the restoration and development of the economy of Peoples' China during the period of reconstruction (1950-1952), was the government-owned socialist industry established as a result of confiscation and transfer to public ownership of the industrial enterprises belonging to comprador and bureaucratic capital, and also of a certain portion of the enterprises belonging to foreign capital. Government-owned socialist industry was of significant scope at the outset of the period of reconstruction. This is explained, to a considerable degree, by the fact that the industry belonging to comprador bureaucratic capital, and a portion of the industry belonging to foreign capital that came under public ownership was typified by a high concentration of production. It should also be noted that all the key categories of the country's economy had previously been i the hands of comprador, bureaucratic and foreign capital. In 1949, government and cooperative industry represented 26.7 per cent of the gross production, and 15.5 per cent of the workers and office personnel of industry as a whole (including handicraft industry). During that year the share of the socialist industry in the production of electric powe was 58 per cent; in coal mining, 68 per cent; in pig iron output, 92 per cent; and in the smelting of steel, 97 per cen in cement production, 68 per cent; etc.

The Communist Party and the Peoples' Government of China gave special attention to the development of the socialist sector of the economy. During the period of reconstruction, 34.7 per cent of total capital investment in industry was directed thereto, and of this, 80 per cent went to the development of production of means of production.

Significant successes in the first years after the establishment of the peoples' power were also attained by national capitalist and handicraft industry which made their contributions to the general national cause of restoration of the economy.

The successful restoration and development of industria production during the period of reconstruction was the result of the wise and flexible economic policy of the Communist Party and the Peoples' Government of China. Durin the period of reconstruction, China effected a land reform and created the prerequisites for involvement of the peasantry in cooperatives. Inflation was liquidated, the circula tion of money was stabilized, as were prices. The budget was balanced, measures to improve the administration of government enterprises were carried out, regulation of private industry and trade was instituted, etc. All this mac for the strengthening of the socialist sector of the national economy, and rendered stronger the economic position of China, as did the brotherly alliance of the working class a the multi-million mass of the peasantry. At the same time favorable conditions for an upsurge of industrial productio in the country were created.

At the end of the period of reconstruction (1952), the vol ume of production of the most important types of industria production in the Chinese Peoples' Republic was not only far above the level of 1949, but exceeded the maximum lev attained prior to the liberation of the country. In 1952, the gross production of all of industry was two-and-a-half tim as great as it had been at the beginning of the period of reconstruction. Moreover, the production of means of produ tion was 346.1 per cent of the level of 1949. The productio of machinery, which is the key to the technical reconstruction of the economy, rose 7.5 times during the period of reconstruction; and the production of consumer products more than doubled.

The high rates of reconstruction and development of industry, particularly of heavy industry, led to significant shifts in the structure both of the economy as a whole, and in that of industry. A change occurred in the relationship between agriculture and industry. There was a considerable rise in the relative share of industrial production. The volume of production by modern industry increased in the overall picture of industrial and agricultural production. Shifts occurred in the relationships between various branches and social and economic sectors of industry. All this created the prerequisites for further transformation of the national economy on socialist foundations.

China has enormous resources for the development of industrial production. According to data that are by no means complete, the geological resources of coal in the Chinese Peoples' Republic come to 1,200,000,000 tons; and those of iron ore to more than 12 billion tons. The Chinese Peoples' Republic is the second in the world (after the Soviet Union) in hydroelectric potential. It has enormous human resources (about 650,000,000 people); a vast territory (9.6 million square kilometers); and also a very great internal market. All this creates the possibility for Peoples' China, basing itself on the brotherly help and support of the countries of the socialist camp, and primarily of the Soviet Union, to create a complete industrial complex embracing all the fundamental branches of industry. The establishment of such a complex will insure that the country will be able to produce the most important types of machines and equipment, raw products and materials with which to satisfy the major requirements of expanded reproduction, and to realize the technical reconstruction of the entire national economy. This will facilitate not only the all-round development of the country's economy, but the cooperation in production of China and the other countries of the socialist camp, and the further economic upsurge of all socialist states.

The restoration and development of the economy during the period of reconstruction, permitted the Communist Party and the government of Peoples' China to proceed in 1953 to the planned development of the national economy of the country. The First Five-Year Plan for the national economy (1953-1957), the major object of which was establishing the initial basis for socialist industrialization of the country, was adopted and began to be realized. This was entirely new in the history of China (the Communist Party of China pointed out that to convert the country from a backward agricultural one, to a leading socialized industrial state, and to create a complete industrial complex in China, would require a time period equal approximately to three five-year plans or more; and if time be counted from the founding of the Chinese Peoples' Republic — approximately two decades. The realization of this objective in such a short period would require high rates of industrial development in the country).

During the First Five-Year Plan, the average annual rate of increase in gross production was set at 14.7 per cent. In reality, the annual rise in industrial production during the First Five-Year-Plan was over 18 per cent. Such high rates of increase signified a sharp upsurge in the industrial production of the country, and a significant change in the structure of the national economy as a whole. They became possible primarily as a result of the concentration of all the commanding heights in the hands of the national economy. The socialist transformation of agriculture that was essentially completed during the First Five-Year Plan, as was that of handicraft industry, capitalist industry and trade, eliminated obstacles to the development of the productive forces of the country.

One of the characteristic features of the First Five-Year Plan was the uneven rate of development of industrial production in various socio-economic sectors, to wit, the higher rates of development in the socialist sector, leading to a fundamental change in the social structure of the industry of China during the First Five-Year Plan. During the First Five-Year Plan, the average annual increase in production by government-owned industry was 18.1 per cent; and that of private enterprise, 4.1 per cent (see table).

Gradual constriction of the volume of production by capitalist industry was a result of the preferential development of the socialist sector of the national economy, and the execution by the government of a policy of converting enterprises owned by the national bourgeoisie into mixed government and privately-owned enterprise.

Share of Various Social-Economic Sectors in the Gross Production of the Country in Percentages*

	1949	1952	1956	Objective for 1957 under the first five-year plan
State owned	34.2	52.8	65.5	61.3
Cooperative	0.5	3.2	2.0	4.4
State and capitalist	2.0	5.0	32.5	22.1
Private capitalist	63.3	39.0	—	12.2

In bending every effort to develop socialist industry, the Chinese Peoples' Republic laid the foundations for the material basis of a new social order, liquidated the private capitalist way of life, transformed agriculture and handicraft industry, and assured the development of the country along the socialist path.

The economic laws of capitalism are losing their force as a result of the realization of these socialist transformations. As socialist relationships of production arise and develop, the conditions for the operation of new economic laws, the economic laws of socialism, come into being.

In accordance with the requirements of expanded socialist reproduction, socialist industrialization in the Chinese Peoples' Republic is proceeding under conditions of the primary role of heavy industry. As a result, fundamental changes are in progress between Groups A and B, with an increase in the share of production of the means of production in overall industrial production.

	Unit of Measurement	1949	1952	1957 (preliminary)	1957 plan under first 5-year plan
Production of means of production (Group A)*	Millions of yuans	3,100	10,730	32,780	24,320
	Percentage of total	28.8	39.7	52.2	45.4
Production of consumer goods (Group B)*	Millions of yuans	7,681	16,284	30,020	29,240
	Percentage of total	71.2	60.3	47.8	54.6

Thus the gross production of industry in People's China during the First Five-Year Plan increased approximately threefold as measured in costs, and exceeded the plan objectives by more than a third.

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* Handicraft production excluded.

The volume of production in the most important products of heavy industry grew greatly during the First Five-Year Plan years. In 1957 (preliminary data), the production of electrical energy was 19,300,000,000 kilowatt hours, as against 7,261,000,000 kilowatt hours in 1952; while corresponding figures for coal were 120 million tons and 63.5 million tons; for iron, 5,898,000 tons and 1,900,000 tons; for steel, 5,340,000 tons, and 1,349,000 tons; for metalworking lathes, 29,000 machines and 13,700 machines; for cement, 6,860,000 tons and 2,861,000 tons.(3)

During the First Five-Year Plan the rates of increase of heavy industry in the Chinese Peoples Republic considerably exceeded the rates of development of light industry. The average annual increase in the rates of production of the means of production was 24 per cent, and that of consumer goods was 13 per cent. The average annual rates of increase in production of the most important forms of heavy industrial production during the First Five-Year Plan were: pig iron, 25.4 per cent; steel, 31 per cent; electricity, 21 per cent; coal, 14 per cent; petroleum, 27 per cent; manufacture of machinery, 33 per cent; and cement, 18 per cent.

While providing for preferential development of heavy industry, the Communist Party and the People's Government of China simultaneously gave great attention to the problems of light industry. To begin with, light industry plays an important role in the socialist industrialization of People's China. The development of light industry is necessary to satisfy the multi-faceted requirements of the people for everyday life, and to raise the material and cultural standard of living. Moreover, light industry provides substantial accumulations of funds than can be used to industrialize the country. Characteristic of light industry are relatively small capital investments, when compared with heavy industry; faster completion of construction projects; and a rather high turnover of capital, and high profitability of the enterprises.

Ratio of Accumulation of Funds and of Capital Investments in Government-Owned Light and Heavy Industry — 1952-1955 (billions of yuans)*

Years	Industry as a Whole	Including	
		Light Industry	Heavy Industry
1952-1955	+5.55	+10.82	-5.27
1952	+1.06	+1.75	-0.69
1953	+0.82	+2.24	-1.42
1954	+1.43	+3.12	-1.68
1955	+2.24	+3.71	-1.48

The data adduced show that the accumulations acquired from light industry not only covered capital investment therein, but provided a considerable surplus increasing from year to year.

In accordance with the initial goals of the First Five-Year Plan for the Chinese Peoples Republic, the capital investments in heavy industry were to be 88.8 per cent, and of light industry, 11.2 per cent; in other words, the ratio of capital investments in heavy and light industry was to be 8:1. These proportions were essentially correct. They were determined on the basis of the principle of the preferential increase in production of the means of production, and in the light of the concrete condition of the Chinese economy at that time. As we know, at the beginning of the First Five-Year Plan, the basis of heavy industry of the Chinese Peoples Republi was as yet very weak, and light industry was predominant in the industrial production of the country. However, durin the First Five-Year Plan, the government found it possibl to change the ratio between the capital investments in hea and light industry to 7:1.

Subsequently, the Communist Party and the Government of the Chinese Peoples Republic believed it necessary, in accordance with the objective of uninterrupted increase in the level of consumption by the masses of people, and the fact that the productive capacity of light industry was as y inadequate with regard to certain products, to re-examine the ratio of capital investments between heavy and light industry, changing it from 7:1 during the First Five-Year Plan, to 6:1 during the Second Five-Year Plan (1958-1962 The establishment of a new ratio between capital investme in heavy and light industry will facilitate further realizati of industrialization of the Chinese Peoples Republic, and i crease in the material welfare of the country's population.

During the First Five-Year Plan, attention was concentrated primarily on capital construction and, within it, on industrial construction in the first instance. According to preliminary data total appropriations for capital construction came to 48.8 billion yuan in the First Five-Year Plan or 114.1 per cent of the plan objectives. During this perio construction and reconstruction of 825 major industrial enterprises (156 of which are being built with the assistance of the Soviet Union), constituting the foundation of the socialist industrialization of People's China, were begun. During the First Five-Year Plan the reconstruction of the Anshan Iron and Steel Works in the northeast was fundamentally completed. The construction of the Ukhan Iron and Steel Works in Hopei Province, and of the Baotou Iron and Steel Works in the Inner Mongolian Autonomous Regio was begun. In 1956, the first automobile factory in China went into operation in Changchung. The First Five-Year Plan also saw completion of such major industrial project as: the Harbin plant manufacturing cutting and measuring tools; the Shenyan Pneumatic Instrument Works; the Chzhenchzhou Power Plant; and a number of other major industrial enterprises. The Soviet Union provided comple sets of equipment for these plants, gave assistance in the installation of the equipment and in starting the operation of the plants. All told, 449 enterprises were completely o partially brought into production during the First Five-Yea Plan. In addition to the erection of the major industrial projects, the construction of 2300 medium-sized and smal industrial enterprises was pursued during the First Five-Year Plan.

It should be emphasized that the correct solution of the problem of combination of construction of large, medium and small-sized enterprises is of major importance for capital expansion under the conditions existing in the Chinese Peoples Republic.

With the object of establishing, in the Chinese Peoples Republic, a complete industrial complex, first priority is gi to the erection of major enterprises in fields new for the country, or in fields poorly-developed hitherto: such as i and steel works; oil refineries; tractor; automobile; aircraft; and other factories. Along with the construction of major enterprises, the Communist Party and the government of the Chinese Peoples Republic are giving considerable attention to the erection of a large number of mediu sized and small enterprises. The advantage of such enterprises lies in the fact that their construction requires shorter periods of time than is the case with large enterprises, and substantially smaller capital investments vhich, moreover, are repaid rapidly). In addition, a larger umber of workers can be given jobs at the enterprises, in-smuch as they are not as highly mechanized as are large nterprises. The latter consideration is quite important in ne Chinese Peoples Republic where there is an excess of nskilled labor. Also to be taken into consideration is the act that the medium-sized and the small enterprises can be quipped primarily with plants produced in China itself, and nat they may be built to make use of comparatively small eposits of raw materials and tools near the areas where ne products to be made in these plants will be consumed. 'he construction of medium- and small-sized enterprises rovides substantial economy of means, and makes for the nost rapid possible development of industrial production in ne Chinese Peoples Republic.

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*Plus sign represents an excess of accumulations over capital investment, and a minus sign an excess of capital investment over accumulations.

In the Chinese Peoples Republic, the development of local ndustry is now given much attention. Medium- and small-ized enterprises of local industry are being erected in very county and township. More than ten of the country's rovinces, Kingsu, Shensi, Yunnan, Kweichow, Hunan, nhwei, Honan, and others, were scheduled to increase the ross output of the local industry by more than 50 per cent – measured in costs — as of 1958. Many provinces, cities nd countries are struggling to the end that, within the next ive to seven years, the gross output of local industry will xceed — as expressed in costs — the gross intake of agri-ulture of the given region. As a result of the execution of he grandiose plan of the development of local industry put orth by the Chinese Communist Party, the gross production f all industry will, in five to seven years, represent the ulk of the overall production of industry plus agriculture.

Construction of local enterprises in the iron and steel nd mining industries, of small power plants, enterprises o produce farm machinery, chemical fertilizer and con-umer goods is underway in all the provinces and autono-nous regions of China.

The development of their own industrial bases in many gricultural districts, will facilitate an upsurge of agricul-ural production in the country, the furtherance of a tech-ical revolution, the further improvement of the living tandard of the peasantry, and the gradual elimination of the ifferences between town and country. Therefore, in the hinese Peoples Republic, the all-out development of local ndustry is not only of economic but political significance. makes for a further reinforcement of the alliance between ne working class and the working peasantry.

Questions having to do with the establishment of correct elationships between the various branches of the national conomy are constantly at the center of the attention of the ommunist Party, the planning and economic organs of the hinese Peoples Republic. One of the most important under-kings is that of establishing correct relationships between ne development of industry and agriculture. This is of rimary importance not only for the progress of the na-onal economy as a whole, but for strengthening the alliance etween the working class and the working peasantry.

As a result of the successes won by the working people of e Chinese Peoples Republic during the First Five-Year lan as regards the industrial development of the country, e share of industry (excluding handicraft production) in the ross output of the economy rose to 46.3 per cent in 1957, against 32.7 per cent in 1952. Nevertheless, agriculture ntinued in 1957 to represent 44.5 per cent of the gross out-t of the national economy of the Chinese Peoples Republic. ne share of the national economy of the Chinese Peoples epublic representing branches of agriculture was about 60 r cent in 1952, and approximately 50 per cent in 1957. uring the years of the First Five-Year Plan, national budget income directly or indirectly originating in agriculture was on the average 56 per cent of total government income. All this indicates that agriculture is, in the Chinese Peoples Republic, the major source of the means going into the industrialization of the country. In 1950-55, about 45 per cent of the cost of industrial equipment and raw materials imported by People's China was covered by funds obtained from the export of agricultural goods.

Agriculture plays an important role in providing raw materials to industry — particularly light industry. Thus, the total cost of industrial production carried out with raw materials coming from agriculture was over 40 per cent of the gross industrial production of the country in 1955.

The rates of development of industry in the Chinese Peoples Republic, and primarily of light industry, are substantially dependent upon the level of agricultural production. In 1952 and 1955, a rich harvest was taken in, and therefore in 1953 and 1956 industry, having adequate agricultural supplies available, was able to develop at higher rates (the volume of gross industrial production in 1953 rose by 31.7 per cent relative to 1951; and in 1956, the growth over 1955 was 31.1 per cent). After the poor crop years of 1954-1956, the rate of industrial development in the country in 1955 and 1957 respectively was, on the whole, substantially slower; and the annual increase of industrial production was therefore 7.8 and 7 per cent respectively.

The interests of the development of the national economy of the Chinese Peoples Republic insistently demand the most rapid solution of the problem of the establishment of the proper relations between the rates of growth in industry and in agriculture. During the First Five-Year Plan period, the average annual rates of growth of the gross production of industry were over 18 per cent, and the gross growth of agriculture per year, approximately 4.5 per cent. These rates of development of agriculture in the Chinese People's Republic do not always correspond to the increase in the needs of the working people of the country for various items of food. Nor do they meet the need for development of certain branches of the national economy, industry, in the first place. If a more correct relationship between the development of industry and agriculture were not provided, this would doubtless have a negative effect in the not too distant future on the overall economic position of China.

The Central Committee of the Communist Party of China corrected this situation in ample time. Comrade Mao Tse-tung in his speech at the 11th session of the Supreme State Conference in February 1957, stated: "Heavy industry occupies the central position in the economic upbuilding of our country. This is something that must be stated with absolute clarity. However, it is necessary at the same time to give adequate attention to the development of agriculture and light industry.

"Our country is a major agricultural country, in which the agricultural population constitutes over 80 per cent of the entire people. The development of industry should proceed simultaneously with the development of agriculture. Industry will have raw materials and a market only under these conditions. Only under these conditions will it be possible to accumulate substantial funds for the development of a powerful heavy industry.... If agriculture and light industry progress, a market and means for the development of heavy industry will appear, and they will develop all the more rapidly.*

The course of simultaneous development of industry and agriculture on the basis of preferential development of heavy industry advanced by the Central Committee of the Chinese Communist Party in 1957 represents a creative development of the theory of socialist industrialization as applied to the concrete and specific conditions of Peoples China where agricultural development continues to predominate in the national economy. Realization of this line of policy in life will speed the rates of industrialization of the Chinese Peoples Republic.

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*Mao Tse-tung "On the Question of Correct Solution of Contradictions Within the People," Pravda, 1957, pp. 46-47.

What are the means to be followed in increasing the rates of growth of agricultural production in the Chinese Peoples Republic?

Truly inexhaustible reserves for increasing agricultural production in the Chinese People's Republic are to be found in the cooperative structure which today rules supreme in the Chinese village. In March of 1957, Peoples China counted 752,000 agricultural productive cooperatives, comprising 97 per cent of all the peasant households of the country. Of these, 668,000 cooperatives (93.3 per cent of all the peasant households) are completely socialist in nature.

Successful socialist transformation of agriculture has made possible an increase in the rates of growth of socialist production. In 1956, the gross production of agriculture rose by 20.4 per cent relative to 1952, and by 4.9 per cent relative to 1955, despite the natural catastrophes to which certain farming districts were subjected.

In the future development of agricultural production, increase in yield per acre will be of the very greatest significance. In the struggle to increase yields, the cooperative Chinese peasantry will, by its collective efforts, erect a large number of irrigation structures, increase the gathering of fertilizer, expand forest plantings, etc.

As the cooperative system in the countryside grows stronger, and agricultural production rises, an increase develops in the demands of the peasantry for means of production and consumer goods, and this, in turn, is an important stimulus to the development of the country's industry.

In order to carry out the line of policy directed at simultaneous development of industry and agriculture, the Communist Party and the Peoples Government of China reexamined the relationship between capital investments in industry and agriculture, so as to increase the investments in agriculture. The ratio of capital investments in industry and agriculture will change from 7:1 during the First Five-Year Plan, to 5:1 in the second.

The program of action for the further development of the building of socialism in the Chinese countryside is the second revision of the "Fundamental Postulates for a Program for the Development of Agriculture in 1956-1957." This draft, approved by the Second Session of the Eighth China-Wide Congress of the Communist Party of China (May 1958), after a new and broad discussion by the entire people, will be submitted for consideration and approval by the First Session of the Second All-China Convention of Peoples Representatives, and will, after official publication, become the primary point of orientation of the Party and the people in the development of agriculture.

The planned and correctly proportioned development of the socialist economy of the Chinese Peoples Republic requires a correct distribution of the productive forces across the country's territory, and, in the first place, of industrial production. Under the conditions existing in the Chinese Peoples Republic, the problem of rational distribution of production is resolved, in the main, by the establishment of proper relationships between the development of industrial production in the maritime and the inland regions of the country.

In old China, industry was distributed in a most irrational fashion, geographically speaking. It was concentrated essentially in the maritime regions, and was weak in the interior; while no industry existed at all in the territories inhabited by the minority peoples. In 1949, 75 per cent of the gross production of industry (excluding the handicrafts), was produced by the industrial enterprises of the maritime regions. The irrational territorial distribution of industry reflected the semi-feudal and semi-colonial nature of old China, which was entirely subjected to the interests of foreign imperialist monopoly.

With the founding in the Chinese Peoples Republic of planned economic construction (1953), one of the major problems in the distribution of industrial production in the country became the development of industry in the inland regions, with the purpose of liquidating the hitherto existing irrational distribution of industry, and providing a uniform decentralization of industry and other branches of the national economy throughout the territory of the country. The gradual transfer of the center of heavy industrial production into the depths of the country, begun in the Chinese People's Republic during the First Five-Year Plan, and the creation in the interior districts of new industrial bases, were accompanied by the accelerated development of industry in the maritime regions, and by the most complete utilization of its capacities there. Problems of the creation of industrial enterprises in the interior, and maximum utilization of the industry of the maritime regions, are intimately interrelated. The experience acquired in economic upbuilding of the Chinese People's Republic during the First Five-Year Plan, show that these problems are the fundamental link in the solution of problems of rational territorial distribution of the Republic's industry.

The creation of new industrial bases in the interior regions of the country is a most important problem in the rational redistribution of the industry of the Chinese People's Republic. In accordance therewith, industrial production in the interior regions of China grew more rapidly during the First Five-Year Plan than it did in the maritime regions. Thus, in the maritime regions, the average annual rise in the gross production of industry was 16.5 percent; and in the interior it was 23 percent. In 1957, the share of the Chinese interior in the overall gross production of industry was 33 percent, as against 26.9 percent in 1952.

Of the 825 major industrial construction projects the erection and reconstruction of which were begun during the First Five-Year Plan, approximately 500 are in the interio of the country. Among the greatest industrial construction projects in the interior of the Chinese People's Republic, we note the Baotou Iron and Steel Works in the western portion of the Inner Mongolian Autonomous Republic, and the Ukhan Iron and Steel Works in Hopei Province. These two iron and steel works represent the basis for creation of major complex industrial regions in Inner Mongolia and central China. In the cities of Baotou and Ukhan, and also in the nearby regions, machine-building plants, mines, coal mines, and other important industrial projects are under construction.

Industrial development is proceeding on a broad scale in northwest China in the provinces of Gansu and Chinghai where there are large oil fields. The expansion of the Yuimyn oil field (Gansu Province) during the First Five-Year Plan, made it possible to increase their output considerabl The oil resources discovered in this district increased considerably during recent years. In 1954, oil prospecting began in the Tsaidama depression (Chinghai Province). Abou a hundred oil-bearing structures have been prospected in this area up to the present. A new petroleum base is being created in Sinkiang. In 1956, as a result of geological prospecting, one of the greatest oil fields in the Chinese People

Republic, that of Karamai was found in the area of the ungari depression. At the present time, industrial recovery f oil is already in progress there. Oil has been found at a place called Urkho, 100 kilometers from Karamai. The area f the Karamai-Urkho oil bearing district may well be expanded to several thousand square kilometers in the future. t is assumed that the oil resources prospected in this region, will many times exceed those of Yuimyn. In the next wo five-year plans, Sinkiang will become the country's most important base for the petroleum industry and non-errous metallurgy.

Prospecting for natural resources is proceeding in southwestern China, as is industrial construction. There, large resources of petroleum, coal, iron ore, non-ferrous metals ores, and hydroelectric power are to be found. During the Second Five-Year Plan, southwestern China will gradually be transformed into a major industrial region where the petroleum industry, ferrous and non-ferrous metallurgy, electronics and a number of other products will get preferenial development.

Simultaneous with the attempt to develop industry in the nterior provinces, the Communist Party and the Government of the Chinese People's Republic are giving major attention to improving industrial production in the maritime provinces of the country (see following table).

In 1955, the maritime regions yielded 57 percent of all he electric power, 25 percent of the coal, 80 percent of the steel smelted, 88 percent of the metal-cutting machinery manufactured, 80 percent of the cotton textiles, and 54 percent of the sugar produced in the country.

Shares of Maritime and Inland Provinces of the Peoples Republic of China in Overall Industrial Production in 1955 in Percent

	Maritime Regions	Inland Regions
Basic capital investment (initial costs)	64	36
Gross value of production	68	32
Number of workers and office personnel	58	42

The Communist Party and government of the Chinese Peoples Republic hold that there is no need to build new arge enterprises in the maritime regions of the country. What is necessary here, primarily, is maximum employment of the existing industrial bases, and erection of new enterprises only when essential. The most complete and rational utilization of industrial capacities in the maritime regions is necessary, not only for the advancement of industrial construction in the inland regions of the country, but also to meet the essential requirements of the people. nasmuch as a considerable number of light industrial enterprises are concentrated in the maritime cities, the maritime regions of the Chinese Peoples Republic have substantial opportunities to accumulate funds. Currently the accumulations by Chinese industry occur primarily in the industrial enterprises of these regions. Thus, money acquired from profits and government taxes from the enterprises of all the branches of industry in Shanghai represented, from the time of the country's liberation to the middle of 1956, approximately 20.9 per cent of the total capital investment for capital construction under the First Five-Year Plan. The profits of industrial enterprises in Tientsin (excluding those owned by private capitalists), for the period from 1949 to 1955, constituted a sum large enough to permit the construction of 36 textile mills (of 100,000 spindles each), and 72 mills to treat sugar beets, having an annual capacity of 25,000 tons of sugar each.

The industrial enterprises of the maritime regions play a major role in the training of personnel, for example: from 1951 through the first quarter of 1956 inclusive, some 210,000 workers, office workers and executives were dispatched to various parts of the country from the industrial enterprises of Shanghai (including more than 63,000 skilled workers, and over 5,400 engineers and technicians).

All the foregoing testifies to the fact that the industry of the maritime regions of the Chinese People's Republic will, for a comparatively long time to come, serve as the basis for the socialist industrialization of the country. Therefore, a proper relationship between the development of the industry of the maritime and internal regions of China, an intimate interrelation between, and mutual aid on the part of, these regions will facilitate the building of socialism in the Chinese Peoples Republic.

The successful fulfillment by industry in the Chinese Peoples Republic of the undertakings of the First Five-Year Plan as far as production of the most important forms of industrial products are concerned, made it possible for the Chinese Communist Party to pose before the Chinese people the goal of overtaking and surpassing England, in 15 years or less, in the production of steel, pig iron, and other most important types of industrial output. In 1958, the first year of the Second Five-Year Plan, a new major forward step will be taken in the development of the national economy. And this will make it possible to create the conditions necessary for fulfillment and over-fulfillment of the grandiose objectives posed by the Second Five-Year Plan.

The realization of the general line of the Communist Party is bringing into motion all the most active factors in the country, is placing them at the service of socialist construction; and this, in turn, is calling forth an unprecedented upsurge of revolutionary enthusiasm and labor activity on the part of the masses of the people. "The general line of the Party to bend all efforts to drive forward and build socialism on the principle 'more, faster, better and cheaper,'" writes the newspaper, Jenmin Jipao in an editorial, "is the concentrated embodiment of the passionate striving of our people to free itself with the utmost rapidity of economic and cultural backwardness, and is also an expression of the fearless spirit and irresistible strength of our people. Our Party is profoundly convinced that if only we are able to get our 600-million-strong people to bend all its efforts to move forward, we will doubtless be able to build rapidly, we will doubtless be able, in a comparatively short period, to overtake all the capitalist countries, and thus to convert our country into one of the most advanced, richest and most powerful states in the world." (Jenmin Jipao, May 29, 1958.)

The achievements recorded in the socialist upbuilding of the Chinese Peoples Republic, and the execution of the socialist industrialization of the country, constitute an enormous contribution to the power of the entire socialist camp. The example of the socialist industrialization of China has great international significance, particularly for the weakly-developed countries of Asia and Africa which face the problem of eliminating their economic backwardness as rapidly as possible.

G. Khromushin:

The Theory of the "Income Revolution" in the US and Contemporary Revisionism

The basic content of our epoch is the transition from capitalism to socialism. The great successes of socialism, the intensification of the class struggle of the proletariat in capitalist countries force bourgeois ideologists to seek out new forms of apologetics for the capitalist order. Along with attempts to discredit socialist construction in the countries of the socialist camp, bourgeois propaganda tries to convince the masses that there have been changes in the nature of modern capitalism capable of ensuring general well-being. The fabrications of bourgeois propaganda are taken up by the right wing socialist leaders and the "theoreticians" of the new revisionism in the Communist Parties of some countries. The source of inspiration for current rightist reformism and revisionism is bourgeois ideology and in particular the theory of "people's capitalism" worked out by bourgeois scholars in the USA and other capitalist countries.

The standard of life of the widest mass of workers in the countries of socialism and capitalism is one of the fundamental questions of the economic competition of the two systems. Principal attention of the ideologists of imperialism is now directed to refuting the Marxist law of the relative and absolute impoverishment of the masses which presumably has no place in the "new era of capitalism." Marxist teachings on the tendencies of capital accumulation are opposed by the theory of the "general welfare state," the theory of the "income revolution."

As the American economist Victor Perlo correctly noted the theory of the "income revolution" in the USA is an attempt to neutralize the revolutionary influence of the great successes of the socialist countries on the workers of the capitalist world. "The economies of the Soviet Union and the People's Democracies are advancing rapidly. Therefore U.S. capitalism, as self-appointed 'world leader' in the battle against socialism, tries to convince the world that it practices a different kind of capitalism, one without poverty, without rigid social classes."(1)

The theory of the "income revolution" is propagandized particularly by USA bourgeois economists S. Kuznets, J. Pechman, R. Musgrave, and others. The greatest notoriety in this sphere has been attained by Simon Kuznets who has come forth with a loudly publicized book, "Shares of Upper Income Groups in Income and Savings," and several articles in the periodical press on questions of the distribution of income in modern America.

The basis of Kuznet's methodology consists of ignoring class differences in bourgeois society. The point of departure of his investigation is some "unit" receiving income. The author selects 1% and 5% of "income receivers" as the upper group and places the remaining 95% of "income receivers" in a single lower group. The magnitude of income of each "unit" is determined by Kuznets on the basis of data from income tax records.

Despite the use of a defective methodology Kuznets cannot hide the facts which testify that the source of income of the higher group is from the exploitation of the working class. The figures in S. Kuznets' tables are carefully prepared for his purposes but it is still apparent that the principal part of the incomes of the upper group consist of dividends, interest and rent, that is, incomes from capitalist private property. "The upper income groups receive the principal part of their income from property in contrast to the lower income groups and the population as a whole." Kuznets makes this highly important admission only incidentally and it appears as one of the minor conclusions of his "analysis" of income distribution. The author follows the course of confusing the question of the causes of inequality in the distribution of income of the different classes of capitalist society. "Inequality in the distribution of wealth," declares Kuznets, "and hence of property incomes, is often assumed to be the main source of inequality in the distribution of total income."(2) S. Kuznet struggles with this "delusion" in his book. In his opinion the distribution of property is not the chief cause of inequality in the distribution of incomes. Let us assume, he writes, that all incomes from property (rent, interest and dividends) were equally distributed among all income receivers. There would still be inequality in the distribution of incomes between the level of incomes of the upper (5%) and lower (95%) groups of income receivers although it would be less than actually exists.(3) Therefore, writes Kuznets, the distribution of property cannot be viewed as the cause of social inequality and differences in the level of incomes.

What can be said about this kind of reasoning? It is wel known, for example, that infant mortality is higher where the conditions of life of the population are worse. This obvious fact is also confirmed by statistical data. However, the methodological "discoveries" of S. Kuznets are able to shed new light on this subject. We need only suppose that the whole population of this or that country and of the whol capitalist world lives under ideal conditions, and then it would be discovered that infant mortality does not at all depend on the conditions of life. Childrens' illnesses leading to death also occur in families of millionaires. Therefore, malnutrition, unsanitary conditions and the high cost of medical service cannot be viewed as causes of high infant mortality!

The author, presuming that the distribution of incomes in the USA has no relation to capitalist property, uses complex statistical methods showing the dependence of income on sex, age, education and place of residence. This kind o analysis could have been useful if the object of the study h been social classes. It is well known, for example, that female labor in capitalist countries is paid considerably less than male labor. It is also well known that workers over 40-45 find it difficult to obtain work. All of this is reflected in the income levels of workers differentiated b sex and age groups. But we would look in vain in Kuznets' book for materials on these questions. Instead of social classes it considers only some mythical “income receiver.”

Thus S. Kuznets establishes that the causes of unequal distribution of incomes in capitalist society are such factors as sex, age, education and place of residence. Only these actors taken together explain the receipt of a great part of he total income of the country by a “relatively small group of persons,” that is, by the upper (1% and 5%) group of income receivers. (We leave to Kuznets’ conscience the word “relative” in relation to the absolutely insignificant group of the wealthy). In “explaining” inequality in the distribution of incomes S. Kuznets begins by noting the sex of income receivers. The upper group of income receivers consists chiefly of males. How, in connection with this, are we to explain the low level of incomes of the remaining 95% of ncome receivers remains a secret of S. Kuznets since in his lower group the majority of income receivers are also ndoubtedly males.

A central point of the author’s study is an analysis of the nfluence of age on the size of income. “Persons from 35 hrough 64, in the prime of experience and active life, predominate in the top income group — a fact often overlooked n discussions of the inequality of income.” This signifies hat the “higher incomes in the prime and experienced ages are, in a sense, compensation for low incomes in the young and apprenticeship ages, and preparation, through the accumulation of savings, for low incomes in the very old ages.”(4)

Persons from 35 through 64, announces Kuznets, predominate in the top income group. This, very likely, resembles the truth; at the age of 35 and older the sons of financial bigwigs inherit the capital of their parents or enter business through other paths and become in this manner independent large income receivers. But Kuznets generalizes the conclusions derived from an analysis of the distribution of incomes in the upper income group to the whole population of the USA. In his view the whole population of the country is a homogeneous mass of income receivers. Since the Rockefellers, Fords, and other big businessmen are distinguished by long life and remain, until their death, income receivers of the top group, an extrapolation of the data on the distribution of incomes by age categories for this group to the whole population permits S. Kuznets to make the highly “consoling” conclusion for workers that their income will continually increase to the extent that they acquire living experience.

True, living experience teaches workers something altogether different. But in S. Kuznets’ hands these are statistical data.

In the top group a decline in income is characteristic for persons more than 64 years of age. Since workers, accordng to the author’s tables, are the same kind of “income receivers” as the representatives of the higher groups, they have no need to fear old age. It is only necessary to suppose that the incomes of workers differentiated according to age groups are proportional to the incomes of the corresponding groups of monopolists, and the problem of old age is solved or workers. However, Kuznets recommends “the accumulation of savings” to provide for old age in those cases where he length of life of the given individual exceeds 64.

One does not have to be an expert on the labor market of he USA to have some notion of how difficult it is to find work at an advanced age and how unstable are the wages of workers over 40. But even if one agrees with Kuznets that he highest incomes in each social group are received by ndividuals over 35, this does not explain the cause of the inequality of incomes of these social groups. The wages of he average worker at 40 are incomparably lower than the profits and dividends of the average capitalist of the same age drawn from the top (1%) income receivers.

Citing age as a factor in the inequality of income distribution as well as citing the sex of income receivers is a conscious attempt to mask the real causes of social inequality in capitalist society.

Among the other factors determining inequality in income distribution the author also includes the composition of the families of income receivers and the place of residence. He believes that if other conditions are equal, income per person will be higher the smaller is the size of the family. Incomes of residents of large cities and capital cities, in his view, are generally higher than the incomes of persons living in rural localities.

“Explaining” in this way the causes for inequality in the receipt of incomes, S. Kuznets shifts to establishing the grounds for the main thesis of his study — that the development of capitalism leads to a smoothing of income levels of different groups of the population. “Proving” that this inequality is, in essence, justified and is a regularity, Kuznets further assures us that capitalism, with time, will “bring fortune” even to those who, perhaps, do not deserve it. “After 1939,” he writes, “the shares of the upper income groups declined sharply.” More than this, the tendency to decline has been growing and “the decline in upper group shares from 1939 to 1948, and apparently also to 1950, has no parallel in our record in either magnitude or duration.”(5)

J. Pechman also attempts to provide a foundation for the “revolution” in the distribution of incomes in the post-war period of capitalism. He compares the distribution of incomes in the pre-war year of 1941 with the post-war year of 1947 when, in his view, the transition from a wartime to a peacetime economy had been completed in America. As a result of his calculations it appears that average consumer money income of all families and single consumers increased from 1941 to 1947 by 89%. Here, the incomes of the five groups into which the author distributed all income receivers grew extremely unevenly. While the increase in the incomes of the three highest of the five groups was somewhat less than the average increase of 85%-88%, the increases for the two lowest income groups reached 116% for the lowest income group and 104% for the second lowest group.(6) In this manner Pechman established the presence of a presumably clear tendency toward the elimination of social inequality. The figures he obtains are highly arbitrary. He admits this himself, citing the deficiencies of official figures and the need for all sorts of provisional corrections.

Kuznets uses different methods of calculation to establish the basis for the same conclusions. According to his estimates, in the period 1939-1948 there occurred a significant decline in the share of upper income groups, chiefly the highest (1%) group of income receivers, to 9.9% and in some years to even lower levels: in 1944 to 8.7%, in 1946 to 9.1%, and in 1948 to 8.5% of total income.(7) Thus, the “income revolution” took place. If one were to agree with Kuznets the “income revolution” signifies the following: the top group of the wealthy, instead of receiving 14-15 times more than the remainder of the population, receives “only” 9-10 times more. If we compare the incomes of the top groups with the incomes of the proletarian masses of the population, the gap in income levels appears even greater. According to official data, in 1939 the lowest group (20%) of wage and salary earners received about 3.4% of all wages and salaries and in the period 1947-1951 their share was reduced to 2.7%. According to Kuznets’ data, the upper (1%) income receivers received 8.5% of total income in 1948. Even if we base ourselves on this figure it would appear that the income of a person in the upper (1%) income receivers is about three times greater than the total income of the 20 per cent in the lower group of “income receivers.” These facts already show how flimsy are all the discussions of the “income revolution.”

But is Kuznets’ statement that the share of the upper income groups in the national income of the USA is only 8.5% correct? Figures show that this share is understated by almost one-half. In actual fact he estimates the incomes of the wealthy on the basis of tax data reported to tax authorities. The incomes of all other income receivers are estimated in a completely different manner, namely on the basis of estimates of the US Department of Commerce which are much closer to reality than the figures of tax returns of capitalists. Consequently, incomes concealed from taxation are excluded from the share of upper income groups in income receipts. While up to 1939 in the USA it was possible to obtain an approximate notion of capitalists’ incomes on the basis of tax returns, after 1939 in connection with considerable tax increases corporations have created an art of different methods of concealing incomes from tax levies. The decline in the share of upper income groups actually signifies only a growth in that part of income which is hidden from tax levies. Consciously avoiding this question, Kuznets hastened to come forth with the theory of the “income revolution.”

The facts concerning the concealment of a considerable part of incomes in tax returns have been frequently noted by many American economists. For example, the financial reviewer of the newspaper the “New York Post,” Sylvia Porter, thinks that the budget deficit for 1953 of 9.4 billion dollars was the result principally of evasion of taxes by wealthy individuals and corporations. Tax evasion in the USA “is developed to the point of a high art... It’s a fact of life today.”(8) Detailed calculations of the magnitude of concealment of various incomes in 1946 were made by the official statistician Selma Goldsmith. Her calculations show that in 1946 the extent of concealment of income from tax levies was 63% of interest, 55% of rent, 29% of entrepreneurial income, 24% of dividends and ...5% of wages and salaries.(9) Therefore, it is not incomes in general, but incomes from property, that is, of the upper income groups in Kuznets’ terminology that are considerably understated in tax returns.

Further, Kuznets excludes from the incomes of the upper group undistributed profits of corporations on the grounds that it is impossible to distribute this part of profits exactly among various percentage groups of income receivers.(10) Naturally, if he investigated the distribution of incomes among the various classes of society he would have had to connect the sum of undistributed profits with the incomes of capitalist property owners. Relying on average “units” and “percentage groups” permits S. Kuznets to exclude from his calculations a considerable part of the actual incomes of the capitalist class, to reduce the share of upper income groups by this amount. It should be emphasized that, in connection with an increase in taxes, the amount of undistributed profits (exempt from taxation) has grown considerably in the period examined by Kuznets. While in 1929 corporations paid out 5.8 billion dollars in dividends after taxes, leaving 2.6 billion dollars of undistributed profits, in 1948 7.2 billion dollars of dividends were paid out and 13.5 billion dollars were retained by corporations. These constantly growing sums are excluded by Kuznets from the incomes of the upper group. A large part of the incomes of the upper groups consists of sums received by capitalists in the form of compensation for administrative positions which they hold. A considerable part of these sums are not reported in tax returns and consequently are not considere by Kuznets in calculating the share of various “income receivers.” In the USA for every dollar now paid out in the form of salaries for high administrative posts in corporations, 12 cents are deducted for pension funds which are n taxed and 40 cents are paid out as remuneration in profit-sharing plans which are only partly subject to taxation. Therefore, as Perlo has calculated, the “salaries” of persons in the upper income groups are essentially one of the forms of capitalist income and must be increased by at least 12%. Also for the purpose of concealing income from taxation, a considerable part of profits is paid out in the form of expense accounts which increase nominal “salarie of capitalists by a minimum of 10%.

Taking all of the basic forms of capitalist incomes into consideration (besides those which are indicated in tax returns), Perlo demonstrates that the shares of Kuznets’ upper percentage groups in the national income of the USA are understated by almost one-half. We present the following figures.(11)

Years	Top 1%	Top 5%
1929	19.2	33.9
1939	16.6	32.1
1945	16.4	33.0
1948	17.2	32.6

S. Kuznets, announcing a tendency towards the eliminati of sharp property inequality between upper and lower grou in the receipt of incomes, devotes a great deal of attention to changes in accumulation (by which he means savings use for personal income). In an article published in March 195 “Economic Growth and Income Inequality,” he notes three groups of factors which allegedly counteract the concentration of savings among upper income groups of the populati In examining these factors S. Kuznets puts forth general “theoretical” propositions on the significance of “legislati interference” and political power in modern society, attem ing to prove that inheritance taxes and other levies as well as government regulated inflation “reduces the economic value of accumulated wealth...”(12)

Announcing that the bourgeois state through its intervention in the economy presumably promotes the elimination of injustice in the distribution of wealth, Kuznets turns to an examination of the concrete factors which allegedly counteract the accumulation of savings. The first factor is demography, that is, the effect on the size of incomes of changes in the composition of the country’s population connected chiefly with immigration. Kuznets states that in a period of less than 50 years the concentration of savings leading to a rise in the incomes of the upper groups had barely any effect. This is because of the rise in incomes of the new elements of the population who originally enter the lower group of income receivers. The second factor Kuznets relates to the development of new, more profitable branches of industry led by new entrepreneurs. The third factor is the increasing significance of service incomes. According to Kuznets service incomes promote an increas in the incomes of the lower groups of income receivers wh can be involved in more profitable branches of industry. In contrast to these are the persons who, having received hig incomes previously, are more firmly tied to older branche of industry as a result of which their transfer to the higher paying categories of personnel is limited.(13)

It is not difficult to see that all of Kuznets’ conclusions relate to the distribution of incomes only within the capitalist class and not at all among workers. The facts fully efute the speculative constructions of Kuznets. Thus, acording to the estimate of the Brookings Institute, in 1929 6% of all savings were concentrated among the upper .0%) group of income receiving families. The average hare of savings of the same group of families constituted 3% in the period 1947-1950. The concentration of wealth the hands of the largest capitalists receiving net annual icomes of over $250,000 is even more evident. This comletely insignificant minority concentrates in its hands rom 65% to 70% of all marketable stock holdings.(14) In ovember 1957 Richard A. Smith published an article in the eactionary journal, "Fortune," on "very rich" people in the SA testifying to the increased number of multimillionaires America. According to data which he presents the numer of persons with incomes in excess of one million dolars in 1954 was 39% greater than in 1953. Undoubtedly ese figures are understated by Smith because the conealment of incomes from taxation by many millionaires xcludes them from the "very rich" category. These figres fully refute Kuznets' fabrications regarding a decline the concentration of wealth.

The absurdity of apologetic inventions about the "income evolution" are fully revealed by comparing the statistical ata of bourgeois economists on the incomes of average icome receivers with information on the distribution of icomes between the principal classes of capitalist society, ie proletariat and the bourgeoisie. An analysis of the istribution of the national income of the USA between apitalists (income from property) and workers (incomes the form of wages and salaries) shows that the "income evolution" is a fiction and the law of relative impoverishient of the workers is an indisputable fact. The table beow clearly illustrates the process of reduction in the share workers in the national income of the USA (in billion dolars).(15)

	1929-1940	1941-1952
Wages and salaries (excluding high salaries of corporation executives included with ownership income)	318.4	944.8
Ownership income	347.8	1,129.8
Percent ownership income of wages and salaries	109.2	119.6

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The social and political purpose of S. Kuznets' statistical onstructions is to support the evolutionary path of social rogress. The basis of democracy and social equality, in uznets' view, is the growth of the "middle class," that is, e group of persons receiving middle incomes. The quantative growth of this sector ensures the creation of a soety of "general prosperity." Such a point of view is very opular in the West because it, best of all, serves the inrests of monopoly capital which attempts to dull the class onsciousness of the proletariat, to divert it from revoluonary struggle.

These bourgeois fabrications about "people's capitalism" rmeate the "creativity" of current reformism and resionism. The conceptions of current revisionists and urgeois ideologists are identical in many ways. Their ntent consists of attempts to convince the workers that n the United States and other major capitalist countries e people are now living under substantially a new form of ciety, in which the monopoly capitalists are no longer minant and where the state has as its basic objective the ltivation of the interests of the working class and other mestic strata. The state of 'general prosperity' is dected as some evolutionary intermediate stage between monopoly capitalism and socialism."(16) All of this demagogy is calculated to damage the unity and fighting spirit of the working class.

The revisionists deny the possibility of applying the major propositions of Marxism-Leninism to the current period of capitalist development. Instead of the Marxist-Leninist teaching of the inevitability of sharpening class contradictions in capitalist society, the growth of the "middle class" is proclaimed as allegedly ensuring the transition to "democratic socialism." This mythical social order is contrasted with both previous capitalism and with "Communism of the Russian type." The principal aim of current revisionism is to convince the workers of the progressiveness of modern capitalism which, in ensuring the "systematic increase of the general welfare" of all and the "freedom of the individual," is peacefully growing into "democratic socialism." Regardless of different nuances, the arguments in favor of the transition to "democratic socialism" differ little from the attempts of bourgeois scholars to support the groundwork for the state of "general prosperity." This testifies to the close connection between the ideology of current revisionism and bourgeois liberalism. Even in the period when it first arose and took shape, revisionism attempted to revise the Marxist teaching of the class struggle and the dictatorship of the proletariat. V. I. Lenin noted that "the objections of the revisionists constituted quite a well-formed system of views, namely, the long established liberal-bourgeois views."(17) Now, the tie between revisionism and bourgeois liberalism has become even closer and more direct.

The Marxist conception of classes and the class struggle is to be contrasted with the opportunistic theory of the "middle class" as the social prop of "democratic socialism." The theory of the "income revolution" is playing a most important role in supporting the groundwork for the existence of the "middle class." The views of the opportunistic and bourgeois ideologists on this question are so closely interwoven that it is impossible to note even formal differences between them.

A most important place in the objections of current right-wing social democrats is occupied by the thesis of changes in the class structure of capitalist society. From the opportunistic point of view, the very meaning of the proletariat under modern conditions has lost all significance because workers constitute the lower level of the "middle class." The capitalist class has also disintegrated. Those entrepreneurs who guide production compose the upper layer of the "middle class" and the functions of industrial leadership as a whole have been transferred from capitalists to engineering-technical personnel, class antagonisms and the irreconcilable struggle have given way to "social cooperation" of all groups of the population who are gradually being transformed into a single "middle class."

The methods of supporting such propositions are highly varied. As an argument, reformists and revisionists generally cite the growth of the technical intelligentsia, employees, the independent professions, and so on. But in recent years the idea that industrial workers, in contrast to the "old" proletariat, are included in the "new middle class" has been increasingly disseminated. It is not difficult to understand the role which the bourgeois theory of the "income revolution" plays in this view. Insofar as the increase in the number of hired workers employed in circulation and other unproductive branches is concerned, these facts do not testify to the appearance of a "new middle class" but only to the parasitical character of modern capitalism.

In both the USA and in England the number of hired workers has been systematically increasing, thereby increasing the population absorbed into the orbit of capitalist exploitation. The total population of the USA is 171 million persons. In 1954 55,418,000 were hired workers. In England out of a population of 51 million persons in 1955, about 21,600,000 were hired workers.(18)

Simultaneously a process of tremendous concentration and centralization of capital is occurring. Even bourgeois statistics cannot conceal this fact. Utilizing official data, the American economist Victor Perlo pointed out that during the period from 1937 to 1956 the capital of the DuPont group increased by 8.1 times, of Rockefeller by 8.9 times, of Mellon by 9.6 times.(19) These figures testify to an unprecedented concentration of capital characteristic of large-scale monopolies.

Thus, the actual tendency of the development of modern capitalism has nothing in common with the theory of changes in its nature and the growth of the "middle class." Facts show that the overwhelming part of the employed population of the USA and England (as in other capitalist countries) consists of hired workers exploited by finance capital. Modern revisionists endeavor to assure the working class that their program is based on a consideration of the changes occurring in the current stage of the development of capitalism. In this, as a rule, they do not trouble themselves with an analysis of the real processes characteristic of the economy of modern state-monopoly capitalism but simply adopt the apologetic theories of current bourgeois political economy. One of these theories is the notorious theory of the "income revolution."

Uncovering the social roots and political direction of the theory of "people's capitalism" propagandized by bourgeois scholars as well as by the revisionists, Foster wrote: "'People's capitalism' is the chief ideological expression of the upswing of American imperialism, of its bid for world mastery, and of its temporary prosperity. 'People's capitalism' as a concept combines in itself all the major political illusions and political weaknesses to which the working masses of this country are subject and which Communists must fight — such as American exceptionalism, class collaboration, prosperity illusions, national chauvinism, and tailing after the political parties of the bourgeoisie."(20)

FOOTNOTES

1. V. Perlo, The Income "Revolution," New York, 1954, p. 6.
2. S. Kuznets, Shares of Upper Income Groups in Income and Savings, New York, 1953, p. 27.
3. Ibid., p. 30.
4. Ibid., pp. 141, 143-144.
5. Ibid., pp. 11, 40.
6. "Studies in Income and Wealth," Vol. 13, New York, 1951, p. 195.
7. S. Kuznets, op. cit., p. 40.
8. V. Perlo, op. cit., p. 16.
9. "Studies in Income and Wealth," Vol. 13, New York, 1951, p. 302.
10. S. Kuznets, op. cit., p. 38.
11. V. Perlo, op. cit., p. 47.
12. "The American Economic Review," March 1955, p. 9.
13. Ibid., pp. 9-11.
14. V. Perlo, op. cit., pp. 57-58.
15. Ibid., p. 52.
16. "Political Affairs," November 1957, p. 51.
17. V. I. Lenin, Selected Works, Vol. 15, p. 22.
18. See "Foreign Countries," State Political Publishing House, 1957, pp. 842, 44.
19. V. Perlo, The Empire of High Finance, New York, 1957, p. 45.
20. "Political Affairs," November 1957, p. 58

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Z. Atlas:

On the Profitability of Socialist Enterprises

At all stages of the development of the economy of our ountry the struggle for increasing the profitability of soialist production has played an exceptionally important ole. In the course of this struggle new sources of industri accumulation were constantly uncovered, the mobilizaon of which has yielded resources of many billions of ubles for accomplishing the plans of communist construcon.

The reconstruction of the administration of industry and onstruction and changes in the system of planning have reated favorable conditions for the strengthening of cost ccounting, increasing the role of economic levers in the eadership of the economy and further increasing the profability of production.

The profitability of production in the broad sense is yield xpressed in a value, monetary form. Profitability is a ategory of commodity production and it assumes the existence of and a certain level of development of commodity-oney relations. Naturally, the content of this category of ommodity production, as well as that of other economic ategories under socialism, is essentially distinct from its ontent in pre-socialist systems.

Under capitalism the profitability of production is exressed in surplus value which appears in the transformed rm of value: for the capitalist the sole purpose of and imulus for production is exchange value in its general, onetary form, the receipt of the maximum possible profit any means available. Therefore, insofar as net income concerned the capitalist is interested only in its value d not in its material content embodied in the mass of use lues. Capitalists, of course, are interested in increasing e mass of use values, but only insofar as this permits em to increase their profits. If the introduction of new chniques would automatically lower the prices of comodities in exact proportion to the reduction of labor exnditures per unit of output, capitalists would lose all inntives to improve production. It is not the satisfaction of cial needs but exclusively the pursuit of profits in excess an average norm which stimulates capitalists to improve e technique of production as a result of which, in the final alysis, the net income of society as a whole increases. t this is only the objective result of each capitalist's purit of value, of profit, of an increase in this individual are in the net income of society. That value and money e everything for the capitalist and use value in itself thing is most obviously expressed during the periodic ises of overproduction when material wealth is sacrificed r the sake of value and money. Capitalist production, as arx indicated, "comes to a stop not when this is required the satisfaction of needs but when the production and alization of profits require it."(1)

With the help of the mechanism of free market redistribuon of profits individual capitalists have the possibility of aking money," increasing their individual rate of profit thout changes in the level of labor productivity and onomizing on material expenditures at their enterprises.

The rule of monopoly under modern capitalism creates eat possibilities for the artificial restriction of supply of output for the purpose of raising prices and maintaining them at a high level. Through the mechanism of monopoly prices capitalists secure for themselves monopoly profits which hinder the development of production and technical progress. The growth of profits frequently does not reflect any progress, any improvements in the technique and organization of production.

Under socialism, the value or monetary form of the social product and of net income is no longer an end in itself and it becomes a means of realizing the goals of socialist production which are determined by the basic economic law of socialism. However, the goals of socialist production are better and more fully attained the greater the economies in the expenditure of social labor (both living and embodied labor) on the production of goods and the more effective is the utilization of productive resources. From this it is clear what great significance profitability has under socialism.

In our literature along with the general concept of the profitability of production the concept of "higher profitability" has become popular. It is known that in "The Economic Problems of Socialism," J. V. Stalin compares the profitability of individual enterprises with "that higher form of firm and constant profitability which provides us with the operation of the law of the planned development of the national economy and with the planning of the national economy, freeing us from the periodic crises which destroy the national economy and wreak great material loss on society, and ensure for us a constant growth of the national economy at high rates."(2) Here, in essence, it is a matter of the superiority of the planned economic system ensuring, in contrast to capitalism, a firm and constant profitability of socialist production. This situation reflects the fact that socialism is a considerably higher and more progressive form of social production.

But can we state, as some economists do, that under socialism there exist two forms of profitability: "higher profitability" at the level of the national economy as a whole, and so to speak a "general" profitability for individual enterprises?(3) In our view this cannot be said.

What is profitability at the level of the national economy as a whole? This is nothing more than the sum of net income created at all socialist enterprises. There is no other "higher profitability" that we can determine and calculate. Higher profitability does not exist along with profitability of individual enterprises since it is at the latter that the net income is created which completely expresses the profitability of the whole national economy under socialism.

A. V. Bachurin in his work on profits and the turnover tax treats the concept of "higher profitability" as an expression of a certain method of evaluating the results of the operations of an enterprise. "The principles of higher national economic profitability," he writes, "are met by the activity of those enterprises which ensure an increase in the output of goods, realize economies in the expenditure of social labor per unit of output and therefore are necessary in order to secure the planned development of the national economy and fulfillment of the requirements of the basic economic law of socialism, although some of these enterprises during certain periods may not derive sufficient net income (profits)."(4)

It is impossible to agree that from the national economic point of view all enterprises whose output is provided for in the plan and which fulfill the quantitative and qualitative indices set for them in the plan are profitable. In such a case even genuinely unprofitable enterprises whose production costs are higher than the average for the industry because of backward technique must be considered as profitable, that is, they meet the "principles of higher national economic profitability." With such an approach to this concept it loses any concrete meaning since the distinction between profitable and unprofitable enterprises is blurred.

The concept of "higher form of profitability" may be used, in our view, only to compare the socialist and capitalist methods of production as a reflection of the superiority of the former over the latter which is expressed in the steady, continuing increase of net income created under socialism.

J. V. Stalin thought that light industry was "most profitable," while heavy industry was "frequently less profitable and sometimes altogether unprofitable," but nonetheless the preferential growth of the latter was required to secure a higher, that is, a firm and constant profitability for socialist production as a whole.

It is known, however, that a "high profitability" of some branches and enterprises and a "lower profitability" of others under the prevailing system of net income accounting is frequently not a real reflection of the economic effectiveness of these branches of industry. It is theoretically conceivable, and some economists have even proposed this as a practical measure, that net income be distributed among branches of industry (in proportion to wage funds) in such a way that branches of light and food industry would become less profitable, while branches of the extractive industry (coal, for example, which is now "unprofitable") would become "superprofitable." In reality there is no basis for considering the coal industry as unprofitable, just as (with a different system of distributing net income) there is no basis for considering the light and food industries as of low profitability with their possession of a high level of technical equipment and their satisfaction of the vital needs of the members of the socialist society. Comrade Bachurin is right when he points out that from a national economic point of view heavy industry cannot be considered less profitable than the light or food industries.(6)

Taking this into account, we must distinguish for each branch a nominal profitability of production expressed in current planned prices and reflecting the existing system of distributing net income, and a real, actual profitability. Distinguishing between nominal and actual profitability is highly important because with the current indicators of the profitability of production used in enterprise and industry balances it is impossible to evaluate their actual national economic profitability since most of net income, taking the form of the turnover tax, is not taken into account in many branches of industry and only appears in the records of operations of a few branches.

It is also necessary to distinguish between the profitability of production of one or another article (nominal and real) and the profitability of enterprises as self-supporting cost accounting organizations. While in determining the actual (full) profitability of production of this or that article it is necessary to consider in one way or another the whole sum of net income created by productive labor, in determining the profitability of cost accounting enterprises (cost accounting profitability) only part of net income, profit, is taken into account. Insofar as the turnover tax is paid directly into the state budget, to this extent this sum does no affect the cost accounting position of enterprises which is determined by the amount of profits received by each enterprise from realizing the output it has produced.

The question of the principles of calculating the real profitability of production of all types of output, that is, calculating the amount of net income in the price of each article, is really the problem of price formation which we are not examining in this article. We are confining ourselves only to questions of the essence and principles of calculating the cost accounting profitability of enterprises.

The amount of profit is directly dependent on the results of the work of the enterprise in the given year, on the fulfillment of the plan for the output of goods as well as for th level of production costs. The results of the activity of the enterprise, based on cost accounting, are expressed in profit.

Under socialism each enterprise, along with fulfilling the production plan, must strive to lower production costs and increase profits. But a necessary condition for accomplishing this production-economic task is the observan by each enterprise of the requirements put before it by the national economic plan in regard to the assortment and quality of output as well as the observance of contractual and planning-financial discipline.

Some methods of obtaining profits which are completely natural, normal, and "legal" under capitalism, are viewed as impermissible under socialism and in some cases as criminally punishable. These include, for example, deriving profits by lowering wages or worsening labor condition of workers in enterprises, increasing the prices of product selling falsified products and so on. Socialism has ended all of these perversions of the capitalist economy. Nonetheless we cannot say that the existing organization for the profitable conduct of economic affairs in the USSR fully corresponds to the tasks and requirements of the growth of the socialist economy. Can we say, for example, that the existing system of cost accounting ensures a genuine regim of economy in all sectors of production?

In the process of production of material goods, as we know, a tremendous amount of previous labor is embodied in production funds. Does the existing system of cost accounting stimulate the maximum effective utilization of these funds? Are the deficiencies and achievements of enterprises in this area reflected in the results of their activity, that is, in the profitability of production?

Of course the degree of utilization of equipment and fixe capital in general are reflected in the profitability of production. Improvements in the utilization of equipment furth the growth of labor productivity and therefore a reduction in production costs. A reduction in amortization deduction per unit of output also operates in the same direction. However, a decline in amortization deductions finds very slight reflection in the growth of profitability of production. This is because these deductions, in most industries, comprise a very slight share in production costs. Thus, for USSR industry as a whole, amortization deductions in 1955 comprised only 3.4% of all expenditures on the production of goods. In only two branches was their share more or less substantial: in oil extraction it was 42.8% and in electric power stations and the electric power network it was 16.8% In industries of Department II the share of amortization deductions was considerably less than the average for all industry; for example in cotton textiles it was only 1.1% and in the sugar industry it was 2.9% and so on.(8) Therefore, even a substantial decline in production funds expressed in reduction of amortization deductions by, let us say, 5% ll effect the production costs of industry as a whole by ly 0.17% and of the cotton textile industry by 0.055% and on.

As far as the effect of an increase in labor productivity production costs and profitability is concerned, the fol- wing must be kept in mind. In order to fulfill and overful- l the plan for the output of goods and the reduction of pro- ction costs of the enterprise there is a striving to utilize ly that equipment which is suitable for the production of e given output. Here the possibility of its utilization de- nds not only on the presence of labor power and the cor- sponding organization of labor but also on the presence various funded materials, raw materials and semi- ished goods. The enterprise can request and receive at is under the given situation surplus equipment, the use which is fully or partially impossible for the indicated asons. This surplus equipment will effect production sts and profitability only through amortization and there- re to a very slight extent. The presence of uninstalled uipment as well as equipment held in reserve will have no fect on the profitability of production since according to evailing rules amortization is not charged on this equip- ent. Therefore the accumulation of such equipment in any agnitude is of no concern to the enterprise (if it has ware- use room) from the standpoint of cost accounting.

Thus, under the existing system of organizing cost ac- unting the enterprise is not interested in achieving an solute or relative decline in the size of basic production nds. Even considerable surplus reserves of basic funds not "press" on the finances of the enterprise and the lat- r prefers "in any case" to have as much equipment as pos- ble.

The unbusinesslike retention and utilization of equipment ich causes it to be discarded and reduced in value ahead time is not reflected in the results of the operations of the terprise. Thus, at the Perovsk and Presnensk machinery ants losses from the liquidation of fixed capital during 46-1956 were, as a rule, more than one-half and in some ars about 80%-90% of their original cost. It would seem t these losses, bearing on profits and losses, should have en reflected in the financial results of the operations of e enterprises, on their profitability. In actual practice, how- er, according to existing rules equipment which loses its oductive significance for any reason is simply "written " from the established fund and this in no way affects the erests of the enterprise, its leaders, workers, and engi- ers.

Matters are no better in the accounting of circulating pital. The presence of large or small amounts of their n circulating capital at the enterprise and its utilization, onomical in some cases and wasteful in others, is not re- cted in production costs and in the profitability of produc- n. Norms of internal circulating capital are only record- on the books; from the standpoint of cost accounting these rms, as for example those for production reserves, have significance because under the existing system of cost counting there is no interconnection between the amount production reserves (whether of standard or above- ndard amounts) and production costs.

The above situation explains the generally known fact that ny enterprises have surplus equipment and above-plan serves of raw materials and other materials. Thus, in report at the sixth session of the Supreme Soviet of the SR in February 1957 the Minister of Finance, A. G. Zve- r, noted that "at many enterprises there is a great deal of tilized technology and the utilized equipment does not k at full capacity... The problem consists of, in every way, increasing the economic effectiveness of new technology, introducing it into operation more rapidly, and utilizing the machinery and equipment available at enterprises more rationally."

Each percent of frozen or ineffectively utilized capital investment was reflected, in the fifth Five-Year Plan, in 1.3 billion rubles, in 1956 in 1.9 billion rubles, and in 1957 in 2.1 billion rubles.(9) Some idea of the hidden reserves available through increasing the effectiveness of utilization of production funds can be obtained, for example, from the following calculation for only one branch — automobiles. If relatively small subsidiary specialized plants would be built for the production of springs, pistons, motors and so on it would be possible, by replacing and modernizing antiquated equipment at existing automobile plants, to increase their capacity up to 850-900 thousand machines per year. Compared to the expenditures for the construction of new automobile plants of the indicated capacity this would yield economies of 2.5-3 billion rubles(10) which could be used for the construction of other enterprises necessary for the country.

In order to economically stimulate a better utilization of available production funds it is necessary to apply the cost accounting mechanism to a greater extent. It is necessary that the enterprise should be materially interested in uncovering unutilized technology, in transferring it to other enterprises for productive utilization. It is necessary to create a cost accounting regime under which economic leaders would really be "concerned" for every unutilized machine tool or power installation and would not permit idleness of equipment.

The national economy suffers considerable losses because of the accumulation of surplus circulating capital at enterprises. According to data for October 1, 1956 some enterprises had commodity stocks in excess of norms amounting to 16.6 billion rubles (in current prices, which are substantially below values for many types of raw materials, fuel, and instruments) while at the same time other enterprises lacked necessary production stocks amounting to 7.2 billion rubles. But the actual surplus of production stocks was considerably more than 16.6 billion rubles since this represents only stocks held in excess of norms. However, under the existing system of organizing circulating capital enterprises try to "provide a basis for" and to receive the largest possible norms of their own circulating capital. Knowing this, financial organs try, on the other hand, to reduce norms of circulating capital of enterprises. As a result of this the established norms often do not correspond to the real conditions of production and realization of goods at enterprises.

The Soviet state conducts a struggle against manifestations of unbusinesslike activity expressed in the anti-state practice of accumulating stocks of materials, fuel, instruments, unfinished goods and in some cases finished goods that are in excess of current production requirements. For this purpose the system of setting norms of internal circulating capital for enterprises which was created in 1931 is used. This system under the existing conditions of the cost accounting organization of production is of definite positive value in that to some extent it restrains particularly zealous suppliers of our enterprises. However, it suffers from serious deficiencies and some bureaucratic excesses; it limits the cost accounting independence of enterprises and most important — it does not ensure the correspondence of production stocks to the actually necessary minimum, which is testified to by the facts cited above.

Enterprises themselves can calculate more correctly, taking concrete circumstances into account, the minimum stocks of production materials, fuel, unfinished and finished goods that they actually need. What is more, they undoubtedly would calculate and plan these stocks in accord with their real requirements if they were prompted to do so by the vital interests of the enterprise, by the system of cost accounting itself.

The reconstruction of the administration of industry and construction has helped to reduce surplus stocks of materials and equipment at enterprises.

It is known that under the previous system of administration in industry many plants and factories accumulated large amounts of suplus and unnecessary materials and equipment which were intensely needed by other enterprises. In the Gorky economic region alone the economic council found that such materials amounted to 59.5 million rubles. In connection with this the economic council organized some meetings of representatives of plants, factories and other organizations. Over a period of four months materials and equipment valued at 30 million rubles were transferred from some enterprises to others in the Gorky economic region. Besides this, the Gorky economic council sent a bulletin to all economic councils of the country with information on surplus material valuables. On the basis of the Gorky economic council's experience the view was expressed that such measures should be taken everywhere. "The economic council should be the organizers of this. This will promote the development of direct ties between economic regions and will set into motion great material and financial resources."(11)

But the question arises: why is it that the economic councils come forth as the initiators of realizing excess and unnecessary materials and equipment? Evidently because, under the existing conditions of cost accounting, enterprises themselves are either only slightly interested in this or in many cases not interested at all.

In his speech at a conference of leading agricultural workers of the Belorussian SSR in January 1958 Comrade N. S. Khrushchev said: "What will the new decision on the MTS question yield? Both the collective farms and the state will gain. Machinery will be utilized more rationally. The collective farms will purchase only the machinery which they need. The buraucratic distribution of machinery from the center will be ended. Now, unfortunately, there is a great deal of disorder in this matter which results in great losses to the state. The MTS accept any machinery even if they do not need it. They do not sow flax but they obtain flax combines, they do not plant cabbage but they obtain seeding machinery. As a result, a great deal of machinery is not used for years and hundreds of millions of rubles of state resources are wasted."

Unfortunately, for the reason indicated above industrial enterprises also very often accept any machinery even if they do not need it, which is an obvious proof of the serious deficiency of the existing system of cost accounting.

Un-businesslike behavior in the utilization of fixed and circulating capital is permitted not only by lagging enterprises but also by leading enterprises that have considerable above-plan profits and have substantial allocations to the enterprise fund. In our view this indicates that the current organization of cost accounting does not foster a regime of economy on the whole production front.

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With a given volume of the social product the scale of expanded reproduction depends on the relationship between the fund of accumulation and the fund of consumption.

If this relationship remains stable the sources of actual accumulation, that is, of an expansion of production, can be: a) a reduction in the costs of production (production costs) as a result of which there is a growth of net income and consequently in the possibility of accumulation; b) a quickening in the turnover of production funds as a result of which there is a decline in their magnitude per unit of output.

The latter factor can be a source of expanded reproduction directly within the given enterprise when a quickening in the turnover of funds, an increase in the effectiveness of their utilization without any increase in their magnitude, permits an increase in the output of goods without additiona capital investment in fixed capital. How important this factor of real socialist accumulation is may be seen from the fact that an improvement in the utilization of industrial equipment of the USSR by 10%-15% yields, according to provisional estimates, an increase in output equal to the whol annual output of the machinery industry of the USSR.

If the released funds in physical form are not needed for expanding production within the given enterprise they can b productively utilized at other enterprises. This can be accomplished by the redistribution of the indicated funds within the given branch of industry or administrative economic region with or without the participation of the financial-credit system (intra-branch or inter-branch redistribution of fixed and circulating capital by the economic councils within a region). From this it follows that a quickening of the turnover of production funds as well as of circulating funds is one of the sources of real accumulation, of expanded reproduction.

The system of material rewards for workers of enterprises which is used in our industry is directed chiefly to stimulate the fulfillment of the gross production plan and to a lesser degree the production cost plan. At the same time it stimulates very slightly, if at all, economies of production funds, a quickening of their turnover. The existing system of organization of cost accounting and the finances of enterprises frequently promotes the mobilization of som sources of intra-industry accumulation at the expense of others. Time and again leading enterprises which overfulfill their output and production cost plans experience financial difficulties and do not pay their suppliers only because they have become involved with stocks of raw materials, other materials, unfinished and occasionally even finished goods in excess of norms. It is with such situation that bank inspectors are very frequently confronted when analyzing balances and uncovering the causes of financial difficulties of this or that enterprise.

But what does this situation mean? It means that leading enterprises in striving to reduce production costs and crea sources of real socialist accumulation for the national eco omy squander these resources, freezing them in surplus stocks of materials and equipment.

This, it appears to us, is one of the serious deficiencies, one of the contradictions of the existing system of cost accounting of socialist enterprises. In this connection it woul be relevant to compare the situation and stimuli for economizing of production funds at socialist and capitalist ente prises.

For the purpose of a general increase of his profits the capitalist tries to fully utilize his equipment and in no case will he acquire equipment which he does not need at the given moment since a superfluous machine slows down the turnover of capital and reduces his profits. In the same manner for the same reason he tries to reduce to a minimum his production stocks and as rapidly as possible to market his finished output.

However, economies at individual enterprises are combined with colossal squandering at the level of the whole of social production. "Although the capitalist method of production," stated Marx, "compels economies at each separate enterprise, nonetheless its anarchic system of competition gives rise to an infinite squandering of the social

ans of production and labor power as well as a majority
functions which are now unavoidable although in essence
y are superfluous."(12)

Despite the operation of capitalist stimuli for economizing
production funds, the capitalist is unable to ensure the
ximum possible speed of turnover of either fixed or cir-
lating capital. The cause of this is the elemental cyclical
velopment of the capitalist economy and the fact that the
neral crisis of capitalism gives rise to a chronic and fre-
ently very marked underutilization of enterprises.

Thus, as a result of objective circumstances the capitalist
forced to freeze a considerable part of his industrial
uipment and to accumulate large stocks of raw materials
d other materials, as well as finished products which gen-
ally cannot be marketed or which are unprofitable to mar-
t under the given state of competition.

All of these conditions for the enforced freezing of produc-
n and circulating funds are eliminated under socialism
ere produced goods can be quickly marketed at stable
ices ensuring, given the fulfillment of the production cost
n, the receipt of planned profits. Therefore, there are no
asons under socialism which could justify the underutili-
tion of equipment(13) and the accumulation of stocks of
terials in excess of current needs and in particular the
cumulation at storehouses of stocks of finished goods in
cess of norms. This is one of the great advantages of the
cialist economic system over the capitalist which, in
actice, however, is not utilized to a sufficient extent.

In his doctoral dissertation on the subject "Fixed Capital
Industry of the USSR and Its Utilization," A. A. Arakhel-
, for the purpose of stimulating cost accounting economies
fixed capital, proposed that amortization be charged to all
pital, including capital that is not operating. This pro-
sal, in our view, is reasonable in itself but its realization,
st of all, would not be very effective because of the low
lative share of amortization in production costs and sec-
dly, it would distort the indicator of production costs and
late the principles of calculation insofar as the indicated
uipment was not actually utilized in the production of the
en output.

For the purpose of strengthening material stimuli for
nomizing on production funds it is necessary, in our
w, to establish a direct connection between the profits
an enterprise and the amount of production funds avail-
e to it. This will prompt each enterprise to refrain from
quiring any equipment it does not need and henceforth to
e orders only for such new equipment as it really re-
res. The profit it receives must reflect the actual achieve-
nts of each enterprise not only in reducing production
sts but in effectively utilizing all available production
ds and, in particular, in speeding-up as much as possible
turnover of circulating capital. How is this to be at-
ned? It appears to us that the organization of cost ac-
nting and of the finances of socialist enterprises must be
built along the following lines.

At present the level of profitability of enterprises is de-
ed as the relationship of the amount of profit to produc-
costs. However, the calculation, in this manner, of the
e (or norm) of profit by no means serves as an actual in-
ator of the profitability of production. A necessary condi-
for the creation of net income is the utilization, in the
cess of labor, of not only that part of capital whose value
ransferred to the finished product in the given period and
ncluded in its production costs but the whole mass of
duction funds, including building, structures, equipment,
porary stocks of materials as well as finished but as yet
marketed output. Therefore, profit, as the difference be-
en planned production costs and the price of marketed
output, should be calculated as a percentage of the fixed and circulating capital of each enterprise or branch. The level of profits calculated in this way would be, it appears to us, an indicator of the profitability of the enterprise.(14) This indicator would express the yield of the cost accounting enterprise as the difference between the sum of resources granted it by the state for the production of goods and the increased amount of resources available at the enterprise as a result of its marketing of the finished product during the given production cycle (concretely, a year).

Does this method conflict with the definition of profitability in the labor theory of value and does it mean that the proponents of this point of view propose that capitalist methods of conducting business activity be mechanically transferred to the socialist economy? Such objections are unfounded on the following grounds.

Of course, value is created by living labor and only by labor. However, living labor without the high degree of technical equipment which exists at most socialist enterprises would not be able to produce the kind of economic effect which is contained in net income and is embodied in a definite quantity of use values — means of production and objects of consumption. Socialist society must know and take exact account of the economic "yield" of funds,* that is, the national economic effectiveness of their utilization. "The real wealth of society and the possibility of a constant expansion in the process of its reproduction depend not on the duration of surplus labor but on its productivity and on the greater or lesser profusion of those conditions of production under which it is improved."(15) This statement of Marx also applies fully to a socialist society which must determine the effectiveness of labor and its productivity, taking into account the degree to which production is provided with the corresponding material-technical conditions.

The accounting and planning of profitability of socialist enterprises as a percentage of fixed and circulating production funds can help to increase actual accumulation and the utilization of currently hidden reserves of production.

Under the proposed method of planning profitability, in order to fulfill and overfulfill the accumulation plan (on which deductions into the enterprise fund depend in particular) the leaders of the enterprise, social organization, and all workers and engineering-technical personnel will strive not only to fulfill and overfulfill the output and cost reduction plan but also to achieve maximum economies on fixed and circulating funds. These economies will be a factor which raises the level of profits of the enterprise just as do reductions in production costs. This is required for a genuinely rational, economical conduct of the activity of the enterprise.

The principle of determining profitability presented here is, in essence, used in calculating the economic effectiveness of capital investment under the name of "period of recoupment." The principle of calculating a definite period of recoupment in planning capital investments was recommended in 1956 by the USSR State Committee for the Introduction of New Technique for general use by its planning organizations in choosing variants of capital construction. A new organ, the State Scientific-Technical Committee of the Council of Ministers of the USSR did not rescind this recommendation; on the contrary, at a meeting of the Committee in December 1957 this principle was unanimously approved.

In concentrating on planned production costs only, that is, without taking account of the volume of capital investments and the period of their recoupment, it is impossible to select the variant of construction of this or that project which is of optimum advantage for the national economy or to solve the problem of the direction of capital investments in branches producing substitutable types of raw materials, other materials, fuel and so on. Rejection of the principle of recoupment, as some economists have required, would deprive us of an objective criterion of the economic effectiveness of capital investments. Ignoring such a criterion leads to voluntarism, gigantomania, and surpluses in capital construction.

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* [Equipment, etc., used for production under socialism.—Ed.]

The principle of recoupment of capital expenditures is now used in granting bank loans for capital investments.

According to existing procedures banks must grant loans for capital investments for developing the production of commodities of mass consumption by local industry and the industrial cooperatives and for improving the technique of production in all branches of the national economy. Banks may grant these loans only if the capital investments undertaken with the loans provided by the Industrial Bank will be recouped in not more than six years, and in the case of State Bank loans in not more than three years. Such periods of recoupment of capital investments signify that in the first case these investments must yield the enterprise not less than 18.1% profit per year and in the second case not less than 35.3% (including the interest rate).

Under these conditions banks have granted economic organizations and enterprises in various branches of the national economy loans of a billion rubles. If estimates of the introduction of new technique have been made correctly, then given the availability of the necessary materials and equipment, the utilization of these loans will produce an important economic effect expressed in an increase in the profitability of these enterprises as well as an increase in the quantity of various use values produced in excess of the plan.

Thus, we are not proposing some sort of new principle of calculating the profitability of production which, in the view of some economists, is unacceptable for a socialist economy. We have attempted only to provide some foundation for a principle of calculating the profitability of production which is already used in practice in some cases and to show the suitability of extending it to the whole sphere of current cost accounting activity of socialist enterprises.

A transition to the proposed principle of calculating profitability can be accomplished without connecting it with a reconstruction of the existing price system (although this suffers from serious deficiencies and is in need of improvement) but rather on the basis of the current existing planned level of profits (in % of production costs) for individual branches of the socialist economy. Starting from existing purchase prices of enterprises and given financial conditions of enterprises it is possible, for example, to calculate the planned norm of profitability for branches of industry and enterprises in the following manner:

$$L = \frac{Q(P - Co)}{Fi + Ci} \times 100$$

where L is the level of profits, Q is the quantity of output produced by the enterprise in a year, P is the purchase price of the enterprise per unit of output, Co are production costs, Fi is average annual fixed capital and Ci is annual circulating capital calculated from the balance of the enterprise.

Suppose the norm of profitability calculated according to this formula is 5%. This means that the usual deductions into the enterprise fund would occur within the limits of this norm and if profits should be above the planned norm then deductions into this fund would take place, as now, at higher rates established by law for above-plan profits. (We are not concerned here with the question of the need for introducing long-term norms of profit for enterprises calculated over a number of years.)

As the above formula shows, the actual level of profits and therefore deductions into the enterprise fund (in which the whole collective of workers, employees, and engineerin technical personnel is materially interested) will be higher the greater is the output of finished goods (insofar as there is a certain amount of profit per unit of output), the lower i the level of production costs per unit of product, and the smaller is the relative magnitude of fixed and circulating capital available to the enterprise and included in its balan

Under the proposed method of determining the planned norm of profitability of production the role of production costs as the basic qualitative index of the work of the enterprise is not in the least bit diminished since the profits obtained by the enterprise will be determined, as now, by the quantity of output and the level of its production costs. The proposed formula introduces an essential correction in the calculation of the norm of profitability of enterprises and branches. Its level, in accord with the indicated level, is influenced not only by the quantity of output and the profits received but also by the amount of utilized fixed and circulating capital — both planned and actual.

If the norm of profitability calculated in this way for a given branch of industry turns out to be excessively high or low in comparison with the level at normal cost accounting conditions it would be necessary to introduce appropriate changes in planned norms of profitability for the given branch. On this basis we would return to the point of departure of our calculations and introduce appropriate changes in the norm of profitability for products in percentage of production costs. Based on the branch norm of cost accounting profitability, the individual level of profitability for separate enterprises would be established analogous to the manner in which planned production costs at separate enterprises are now determined on the basis of average branch production costs.

Thus, the proposed method of planning profits fully retai all that is positive in the prevailing method and at the same time eliminates those negative features connected with its use which do not fully meet the requirements of rationally conducting the economic activity of enterprises. This is achieved by having the index of profitability reflect all the results of the work of the enterprise in fulfilling both quantitative and qualitative indexes, including the utilization of fixed and circulating capital, their turnover. At the same time there will be no need for purely administrative methods of struggling against such undesirable manifestations a an enterprise seeking the highest possible norms of internal ci culating capital because the leaders of the enterprise will themselves try to reduce them to a minimum.

The introduction of the proposed principle of evaluating the profitability of enterprises will make it possible to transform the effort of each enterprise to economize on its production and circulating funds and to speed up their turnover into a continually operating factor for developing soci ist production. The indexes of turnover of circulating capit and output of goods per ruble or per 100 rubles of fixed cap tal, which are not obligatory now for enterprises and which are not used at all at many enterprises, will acquire treme dous significance. With given production costs the amount of profits, according to the indicated formula, is directly proportional to Q, that is, to the quantity of output, and the norm of profit is higher the higher are the relationships K/Fi and K/Ci. Therefore, the basic indexes of utilization o production funds cited above are organically included in the proposed formula. The leaders of enterprises and social organizations will have to keep an eye on these indexes because it is on this as well as on other factors that the fulfillment of the assigned norm of profitability and tual deductions into the enterprise fund will depend. Under these conditions the organization of cost accounting ll be used in the struggle against the anti-state practice freezing the monetary accumulations of enterprises in ove-norm and uncredited stocks of materials, fuel, and ished goods because such stock will exercise monetary essure on the enterprise and vitally affect the interests of whole collective. The fulfillment of the plan for the rm of profitability will reflect a really rational conduct of economy on the whole front of production and unbusiness- ce behavior in any quarter will weaken the financial posi- on of the enterprise and lower its profitability. Advanced terprises will be only those which not only fulfill the out- t and production costs plans but simultaneously, in a siness-like manner and in accord with state directives, at is, in accord with the interests of the whole socialist ciety, utilize their production funds as well as circulating nds.

FOOTNOTES

K. Marx, Capital, Vol. III, 1954, p. 269.

J. Stalin, Economic Problems of Socialism in the SSR, State Political Publishing House, 1952, pp. 24-25.

"The socialist planned economy produces, along with e profitability of individual enterprises and branches of oduction, a higher profitability, unattainable under capi- lism, for the national economy as a whole." ("Political conomy," Textbook, 2nd ed., p. 487).

4. A. V. Bachurin, Profits and the Turnover Tax in the USSR, State Financial Publishing House, 1955, p. 80.

5. J. Stalin, Economic Problems of Socialism in the USSR, p. 23.

6. See A. V. Bachurin, Profits and the Turnover Tax in the USSR, p. 78.

7. Henceforth, for abbreviation, cost accounting profitability will be referred to simply as the profitability of an enterprise.

8. See "Industry of the USSR," Statistical Abstract, State Statistical Publishing House, 1957, p. 29.

9. Calculated from data on the volume of capital investment in the national economy presented in the speech of Comrade N. S. Khrushchev to the Jubilee Session of the Supreme Soviet of the Ukrainian SSR in December 1957.

10. See S. E. Kamenitser, Reserves of Growth in Labor Productivity at Industrial Enterprises, State Political Publishing House, 1956, p. 30.

11. N. Smeliakov, "Utilize More Fully the Advantages of the New Forms of Management in Industry and Construction" (Pravda, 1/22/1958).

12. K. Marx, Capital, Vol. I, 1954, p. 532.

13. Here, of course, we do not refer to the creation of reserves of productive capacity provided by the plan.

14. The point of view presented here is shared by a group of economists: I. Malyshev (see his article in "Problems of Economics," 1957, no. 3), L. Vaag, N. Karotamm, M. Kolganov, and others.

15. K. Marx, Capital, Vol. III, p. 833.

T. Khachaturov:

The Perspectives of Technical Progress

The transition to communism requires a high level of the development of the productive forces, from which goods will flow like a broad river and distribution will be made according to needs. The Communist Party attaches exceptionally great importance to a high rate of production growth. In the historically shortest period we must solve the basic economic problem: reach in per capita production the level of the most developed capitalist countries. Preliminary calculations show that in order to reach the per capita level of consumption of such countries the Soviet Union should increase its production level about 2.5 times. But this is only a general goal. To determine scientifically the necessary growth not only of the whole economy, but also of its branches and to establish the level of production for the whole product as well as for individual goods, we must solve such methodological questions as the following: in comparing per capita consumption here with the consumption abroad should we take into consideration exports? Should we consider the fact that the standard of living of a considerable portion of the population in the most developed capitalist countries, including the United States, is extremely low? Should we mechanically aim at the American level of consumption or, what would be more correct, in a number of cases, take theoretical standards (for example, in respect to the basic foods, clothing, footwear, household appliances, means of transportation)? And so on, and so on. On the basis of the methods worked out we may concretely determine the quantitative levels of production necessary for the solution of this basic economic problem. Of course, production will continue to grow even after reaching this goal.

The growth of production is a very important but not the only condition for the construction of a communist society. The realization of communism depends upon not only an increase in the volume of goods but also on how they are produced. Marxism-Leninism teaches us that a change of social-economic formations is determined not by what is being produced, but how it is produced. It has in view a system of production relations based on a particular form of property (say, feudal, capitalist, socialist) as well as a certain complex of the tools of labor and methods of their utilization with the help of which the production process is carried out, that is, all that enters the term "technique." There is no doubt that technique influences the development and improvement of production relations which, in turn, have to correspond to the existing level of production.

In order to achieve a high level of production development a considerable growth of labor productivity is required because the increase of the number of workers, under conditions of full employment, depends basically upon the natural growth of the population which is relatively modest, as compared with the required rate of production growth.

If labor productivity in USSR industry did not grow and in 1957 remained on the level of 1928, in order to obtain the goods produced by industry in 1957 we would need about 120 million people employed in production. A growth of production between 1957 and 1970-1975 of three times would demand an increase in the number of workers to a total of 360 million, that is, considerably more than the total population of the USSR. Yet because of the eight-fold growth of labor productivity between 1927 and 1957, for a 24-fold increase of the industrial product we would need to increase the personnel in industry less than three times The further growth of production will also be achieved mainly through the growth of labor productivity. Between 1950 and 1957 labor productivity in industry increased almost 70%. If it continues to grow at this rate, in the next three Five-Year Plans it will increase approximately three times and will ensure the necessary expansion of production.

The productivity of labor is measured by the amount of the product per worker per unit of time. This definition of labor productivity makes it clear that its level depends upon a number of factors: the amount of technical means per worker, his experience, training, methods of using basic means, and the intensity of utilization of labor time. In view of this when we say that the growth of production was achieved to a certain degree through an increase of labor productivity, we have in view all those factors influencing the level of productivity.

The main factor of growth of labor productivity is techni progress, the application of the new and latest technique. Here the term "technique" includes not only the means of labor, but also the methods of their utilization, that is, the technology of production, technological processes. Other factors — increase of the skills of the workers, more intensive use of the labor day — produce a similar influence on the growth of labor productivity. It must be emphasized that of great influence is not only the level of technical development achieved, but also how widely it is applied. The latest technique may be applied more or less widely a of course, it will produce the maximal effect only when it i applied widely, when it becomes predominant. And this depends upon the volume of capital investment of which socie disposes, upon the volume of accumulation. The rate of growth of the basic funds of industry in the USSR is lower than the rate of growth of production. Thus, the basic funds of industry in 1956 amounted to 293% of their 1940 level and to 190% of their 1950 level, while the gross product amounted correspondingly to 354% and 205%. Thus for an increase of the volume of production from three to 3.5 times we would need to expand the basic funds somewhat less. This is due to the fact that the development of technique makes it possible to lower relative capital investments.

The basis of technique is knowledge, accumulated by man in the process of his interaction with nature, his struggle for the conquest of the forces of nature. Technique, expressing the relation of man to nature, is an important element of the production forces and eo ipso of the method of production. In view of this it is not isolated also from the system of production relationships. A tool of labor, a machine, a machine tool are the same whether under capitalism or socialism. To assert the opposite would be vulgarization. Yet undoubtedly production relaons and their development produce a great influence on e development of technique, just as technique produces great influence upon the development of production rela- ons.

If the application of the same machine today, under pres- t conditions, is advantageous, while tomorrow, under nanged conditions, it becomes disadvantageous, this does ot mean that the machine becomes worse. It means that e conditions of its application have changed. Not every- ing that is possible is effective in practice. For example, chnically it is possible and even advisable to use as a urce of power ocean tides or solar radiation. However e existing methods of utilization of these kinds of energy re in practice unprofitable and are not used or used very arely. Here is one concrete example. In Engineering (No. 738, 1956, pp. 807, 808) we find a statement that the wer installation on the Severn River in Great Britain may esult in an economy of one million tons of coal annually. et its construction would cost 100 million. Even if half this sum were utilized for the improvement of fuel- urning installations (which in Great Britain are very im- erfect), this would result in an economy of twenty million ns of coal a year. Another example. Technically it is ossible to transfer power at great distance by direct cur- ent, changing the whole power system to direct current. owever, because of great losses of power, this measure r the time being cannot be justified.

The determination of whether the application of some articular installation, machine, or method is advantageous made depending upon the conditions of men's life, upon e order of their social life and, consequently, upon the ystem of production relations. The price of a machine, s value, the amount of social labor invested in it — these e not the qualities of the machines; they are relations mong men. Planning the application of machines, their se — this is also a question of production relations. The election of machines is done by men, the selection of chnical installations — this is not only a technical ques- on, but also an economic question, a question not about utual relations of machines, things, but the mutual rela- ons of men, that is, a question about social relations udied by the economic sciences. The economic sciences hould also show what influence the development of tech- ique, the improvement of the means of labor has upon the evelopment of the production relations. This question will considered further. If the economists have to be au ourant of the questions of technical development in order solve properly economic questions, the representatives the technical sciences cannot isolate themselves from conomic questions. If technical sciences would limit them- elves to questions of the construction and action of ma- ines, mechanisms, and other means of labor, they would emain in the field of physics and chemistry and would not able to solve practical questions of how to apply tech- cal achievements to the national economy.

A study of the mutual influence of technique and produc- on relations is an important task both of the economic and chnical sciences. One has to recognize the justice of the eses which were repeatedly emphasized by Academician N. Nesmeyanov, namely, that the greatest scientific hievements may and even must take place in the regions contact between several branches of science, for exam- e, physics and chemistry, chemistry and geology, physics d biology. New branches of science made their appear- ce, such as chemical physics and physical chemistry, geo- emistry, biophysics etc. These adjacent regions also include e regions of contact between technical and economic ience. Unfortunately far from all representatives of the economic and technical sciences understand this. Many economists have isolated themselves from technique. At one time there was even used a term "technicism" under which the theoretical economists understood those technical-economic questions which, in their opinion, should not be studied by economic sciences, which should not draw away the forces of the economists from the solution of purely economic questions.

The spread of such mistaken opinions brought unfavorable results. It appears that to a considerable degree it was responsible for the fact that for many years the economists could not solve the problem of defining the effectivity of capital investment. This problem belongs to the category of those technical-economic questions which are at the point of contact between technical and economic sciences. It is of tremendous importance for the development of both economic science and practice. It is quite evident that the high rate of expanded production as well as the direction of technical progress depend upon the proper distribution of capital investment by branches and objects. Consequently we must be able to select properly the best variants of capital investment and the application of the new technique.

Working out a method to select the best variant is one of the tasks of socialist political economy which must place a theoretical basis under this question and help in its practical solution. Of course, the application of the balance method is of tremendous importance for the correct planning of capital investment in terms of branches and regions of the USSR. However, the balance method should certainly be supplemented with the method determining the effectiveness of capital investment in order to be able to select the most advantageous variants in the solution of the questions raised by the plan. At the basis of this method should be a comparison of the expenditures of labor in their value and natural form with the expected results, or, in the final account, with the growth of productivity of social labor. Different measures may be used for this comparison. They include the length of the period in which the investments pay for themselves, its reverse quantity — the coefficient of effectiveness as well as a comparison of the productive expenditures and their results expressed in hours of simple labor (if we could find a method expressing the expenditure of complex labor in this way) and so on. The All-Union Scientific-Technical Conference on the problem of defining the economic effectiveness of capital investment and new technology in the USSR national economy, which took place in June 1958, attracted the attention of the economists and engineers occupied in the field of planning and designing. The work done by this conference should be continued and the recommendations accepted by it as a basis should be applied in practice.

The problem of effectiveness of capital investment is very important not only now; it will be of tremendous importance in the far future. Undoubtedly, even under communism the problem of the best distribution of investment in the means of production, so that society obtains the maximum results from such investments, this question will remain with us. A proper determination of the direction of technical progress which would correspond in the best way to the questions of the comprehensive development of production may be made only on the basis of methodology determining the effectiveness of investments.

The dependence of the development of technology upon social conditions is clearly seen in the character of the present development of technology under capitalism and in the period of transition from socialism to communism.

In the 20th century the development of technology was greatly accelarated and automobile transportation, aviation, radio, television, new materials etc., were widely applied. Especially great changes in technique took place in the post-war period in connection with automation, the use of electronic computers and use of atomic energy. The bourgeois economists call these technical changes a "technical revolution." They are afraid of it and in their works they are preoccupied not with the analysis of the possible growth of production or increased welfare of the people, but with finding out what influence this technical revolution may have on the fate of capitalism. The bourgeois economists find parallelism in it with the industrial revolution of the 18th century in Great Britain and are afraid of the growth of unemployment, the reduction in the purchasing power of the population, crises, and a rise of the revolutionary movement.

Under capitalism a reduction of the number of employed as a result of automation is a fact which cannot be denied. A. King in his book the "Economics of Automation" (Part II) writes that the reduction of "direct labor" — the basic production force in the fields now undergoing automation — amounts to 40 or 50%. This reduction only partially is compensated by the growth of the number of workers who produce automatic equipment and appliances. The production of appliances in the United States by volume occupies the second place (after machine tool production) and the number of workers occupied in it increased between 1939 and 1956 six times. This progress will continue with the growth of the use of electronic appliances. According to G. Brown even now up to 50% of the cost of a heavy bomber and 90% of the cost of a guided missile consists of electronic appliances.

Under capitalism the complications connected with the freeing of the labor force because of the process of transition in industry to fully automatized sections and parts of sections are made more difficult by the continuing growth of the population. Not so long ago a scion of Charles Darwin wrote an article which hardly will bring new glory to the illustrious name and in which he joined voices predicting a bleak future for humanity because of the growth of the population. In this article the possibility of an increase of the globe's population by the year 2,000 to four billion is looked upon with apprehension and is considered as an increase in the number of hungry mouths as well as the growth of the number of people looking for jobs while the possibilities of obtaining jobs will be continuously reduced.

The technical revolution does not promise anything good to capitalism: it sharpens contradictions inherent in that system; it creates new difficulties for it.

In the USSR, on the contrary, during the period of transition to communism the application of new, better technology and the resulting growth of labor productivity and possible reduction of the needed expenditure of living labor are looked upon as a tremendous advantage.

The Communist Party and the Soviet government create all the conditions for the flourishing of science and technique and this ensures an unheard-of rate of growth and of improvement in production and accelarates the construction of communism. The socialist system aims at the reduction of labor expenditures which will result not in unemployment, but will make it possible to reduce the length of the working day, will make available time for the many-sided mental and physical development of mankind. The development of technique will be harmoniously combined with the solution of the question of the growth of production and at the same time with making work easier, freeing mankind from heavy physical work and ending the difference between mental and physical labor. The labor of a worker at an automatic machine is the labor of an adjuster who in many cases should have the training of a technician or even an engineer. The application of atomic energy in combination with electric energy will make muc more easy the solution of the task of supplying power to a regions and all branches, including agriculture. This will greatly raise the technical level of all branches of the eco omy, will, in particular, help to transform agricultural la into a variety of industrial labor. At the same time the hig level of production and technical progress will create all the conditions necessary for the further development of production relations in transition to communism on the basis of the development of all-national property and the transition to labor according to ability when work will become a vital necessity for men. At the same time the gro of communist consciousness and communist education wil continue. Because of all this, under conditions of transiti from socialism to communism the growth of production an the application of new technology will be of tremendous positive significance and will have a great influence on the development of production relations. The problem is how to select skillfully the most effective kinds of technique and in this way accelerate the rate of production development.

Great technical changes have taken place in many branc of production. But is it possible to say that these changes signify a technical revolution or at least its beginning? In order to answer this question we have to study the directi of the development of technology not in some isolated bra but in today's whole technology. This task is not for some technical science, it is a task for the economists who, whi studying comprehensive changes in technique and in production, must develop a concept of today's technological development and answer the question of whether really a new technical revolution has begun.

Presumably this question should be answered in the affirmative. First of all we should consider the peculiaritie in the development of our motherland which at the time of the establishment of a socialist regime was a backward, agrarian country with a weak industry. Yet in a short historical time it became a great industrial power, the secon industrial giant in the world with a modern technology in the key branches of industry and with a powerful technical base in agriculture. As a result of the USSR's industriali tion all of the most important branches of production have been armed with modern technique. This great technical change made possible the creation of the material-production base of socialism and produced a great influence upon the development of production relations. In recent years Soviet technique moved rapidly forward and in a number of fields moved ahead of the technique of the capitalist countries. Artificial satellites of the earth, intercontinental ballistic missiles, first-rate reactive and turbo jet planes for the main aviation lines, the first atomic po station, a synchro-phasotron of 10 billion volts, an atomic powered icebreaker — all these latest examples of Soviet technique are considerably ahead of Western technique. The development in the last ten to fifteen years is really such a great leap forward that we may speak of the beginning of a new technical revolution.

If the technical revolution of the 18th century, which sig nified the transition to large-scale capitalist production, was based on the application of machines and steam powe the technological revolution of the 20th century, signifying the transition from socialism to communism and the decline of capitalism, is based on the application of automation and atomic energy.

Automation will make it possible to reduce the number of rkers or the length of the working day, to lower the cost production and to an enormous degree increase the vol- e of production and improve its quality. It is being more d more widely applied in power stations, machine build- ;, metallurgy, chemical production, the food industry, and nsport. In machine building in a number of cases the pital investment in automation is repaid in three to four ars. At present all hydroelectric stations of the Ministry Electrostations are automatized and two-thirds (by power pacity) of power stations have telemechanical controls. the thermopower stations regulation of the boiler feeding almost fully automatized and in 4/5 of the boiler aggre- tes the regulating of the fuel burning is automatized. The estments in automation are repaid in two to 2 1/2 years ough the reduction in the number of service personnel d reduction of the fuel expenditure.

In some branches of the chemical industry the expenses automation are repaid in 1 1/2 to 2 years; moreover, der automation the work conditions improve, especially the branches where production conditions are harmful the workers' health. The quality of the goods is im- oved and they are standardized. Automation produces eat effect upon transport. For example, the automation one traffic substation (and there are hundreds of them the railroads) costs 100,000 rubles; but it frees from to 12 men whose annual wages amount to 90 or 100 ousand rubles. In this case the capital investment is re- id in one year. Unfortunately in many cases in practice change to automation is proceeding too slowly.

It would be a mistake to calculate the effect of automa- n on the basis of the same volume of production which s produced before automation. Automation makes it ssible to increase production considerably. This is one its great advantages: it is exactly through automation it it is possible to reach such a high level of production it a transition to communism becomes possible. In order determine the effectiveness of automation we should con- ler this advantage. Consequently the effectiveness of tomation should include the consideration of the growth production. If, after the introduction of automation the lume of production is increased 1.5 to 2 times then we ve to determine what volume of capital investments would needed to achieve such an increase in production with- automation; this is the so-called coefficient of auto- ation effectiveness. Moreover we have to take into con- leration that automation lowers the cost of the products, pecially if the production volume is increased. In such ase the general effect of automation can be determined a sum of savings in capital investment and savings in cost of the product for a comparatively long period, example, for the length of life of the equipment.

In case of a reduction of the need for labor power as a sult of automation we have to consider not only the direct ving of wage expenses, but also the effect of freeing rkers at a given section of production. This is a tre- ndous advantage of automation under socialism. Under cialism, when production is growing steadily, freeing rkers in the production process at one section of the tional economy means the possibility of additional owth of production at some other section of the national onomy where this labor power is utilized. If we consider t the value of the new product produced by a worker, ich is the sum of the product for himself and of the prod- for society (V + S), amounts on the average to 15,000 oles a year, then the freeing of labor power as a result automation gives an additional effect equal to that prod- which will be produced by the freed workers in some other branch of production or at some other concern. Consequently freeing one thousand workers will result in an economy of 15 million rubles. This additional effect must be considered too.

Finally we must consider that automation is the latest technique, the application of which actually is in its beginning. During the first months and even first years of its application when the process of mastering it has not yet been completed and the production volume has not yet reached the figure of the designers, the effectiveness of automation, naturally, may be lower than when the technique is fully mastered. In view of this the effectiveness of automation should be calculated not for the first year, but at least for the third year or even fifth year of its operation, though in many cases expenditures on automation are repaid in a shorter period.

Frequently the economic results of automation suffer from the fact that in some concerns proper conditions for its effective use have not been created. Automation is most effective in the branches of mass production and uninterrupted production such as in electro-stations, petroleum refining, the ferrous metals industry, the chemical and food industry, and transportation. Automation in machine building ensures a tremendous increase in labor productivity and a reduction in costs. However, for the time being, automation in this branch is applied on a small scale and does not produce a great effect. This is explained by several causes. First of all, automation installations are still very expensive. We have to lower their cost and for this purpose increase serial production of various appliances. It is advisable to produce serial machine tools with interchangeable units so that in case of necessity it would be possible to change the technological process.

We must also expand the production of appliances, apparatuses, and mechanisms for automation: gauges, analysers, data feeders, telemechanical apparatuses and semiconductors. The maximal effect of automation can be obtained only when the whole technological process is reexamined from the point of view of creating the most favorable conditions for automation. Sometimes an insignificant change in design is sufficient to simplify the technological process and make possible the transition to automation.

Changes in technology are of great importance for the fulfillment of the third important condition increasing the effectiveness of automation: reduction of the auxiliary operations and at the same time reduction of the number of auxiliary workers. The part of the auxiliary workers in our plants is still too great: in industry as a whole they make up to 45% of the total number of workers, in machine building — about 50% and at individual plants — considerably more. If, after the introduction of automation, the number of auxiliary workers is not reduced or is even increased, automation may not produce the necessary effect.

The automation of transport and of loading and unloading operations is very important. Here lie tremendous possibilities for the reduction of the number of workers. Yet the rate of automation in this field is frequently smaller than the general rate of automation.

New perspectives are being opened for automation with the introduction of electronic controlling and computing machines. With the help of programming-instruction installations the automatized machine tools can be given complex assignments: automatically introduce changes in the work procedure on successive stages of processing in time to finish one kind of operations and start another, etc. The application of electronic computers, program instruction and control machines makes it possible to carry out complex automation of production.

The level of automation in the USSR still is behind that of the capitalist countries and especially behind that of the United States. In American machine building large-scale, mass production industries were the first to be automated. Thus, automation is applied at more than 50% of the large concerns with more than 1,000 workers each, while at the relatively small concerns it is not used much. A beginning has been made in the field of complex automation. For example, at an automobile plant in Cleveland with an automated conveyer and 200 positions complete motors leave the line at a rate of 4,000 a day. Automated control of the equipment is of great importance for complex mechanization. Specially designed automatic machine tools have program instruction units and copying mechanisms. In some cases perforated paper tape or magnetic tapes are used for programming instructions. General Electric Company worked out a system of magnetic fixation of the movements of a machine controlled by a highly skilled worker; these movements, fixed on the tape, are automatically repeated by the machine.

Electronic computers are also being increasingly applied. The Ohio Edison Company installed an electric machine which can simultaneously control the operations of 35 generators at nine plants in different cities. According to the Oil and Gas Journal all intermediary pumping stations of the largest oil pipeline in the state of Illinois are controlled with the help of an electronic mechanism by one worker. Electronic machines for doing all kinds of bookkeeping operations are being applied more and more widely and produce a great economic effect. An American corporation used to spend $545,000 a year on the preparation of payrolls for its 15,000 workers with the help of ordinary electric machines. An electronic computer carries out this operation three times faster and saves 35% of the cost. We could cite many such examples. Unfortunately, in the USSR electronic machines are not yet used in office work. But two million office workers are doing bookkeeping in our country. The machines can free a substantial portion of these workers. If we could cut down their number in half, the resulting economy would pay for the acquisition of thousands if not tens of thousands of electronic computers, while the workers freed in this way could be used for the expansion of production.

With each passing year automation will be applied on a broader scale. Under communism all mass-produced goods — ferrous metals, chemicals, details of machines, fabrics, footwear, kitchen ware and food products will be produced in automatized plants. This will make it possible to reduce the number of workers in these branches and to shorten their labor day.

Beside automation an important part of technical progress is mechanization which frees man from heavy physical labor. This does not mean, of course, that under communism physical labor in general will disappear. On the contrary it would be very desirable for the brain workers to do some physical work. But heavy, exhausting labor should be replaced by machines. There is no sharp line of division between mechanization and automation, and partial automation of production starts sometimes when mechanization is still being introduced. In the USSR the cutting and breaking down of coal, the delivery of iron ore, the excavation of peat, the felling of the trees etc. are 90 to 100% mechanized. The sphere of application of mechanisms will be greatly expanded.

The peaceful utilization of automic energy — this greatest discovery in the history of mankind — will be of tremendous importance in the transition to communism. Even quite recently the opinion prevailed that the scarcity of fuel reserves in the next decade would become a brake on the growth of production. This anxiety has now disappeared. At the disposal of mankind really limitless reserves of power are available. According to the UN power resource of uraniam and thorium in the world are 23 times as larg as the power reserves of mineral fuel — coal, petroleum, oil shale and natural gas. According to Libby's (US Atomic Energy Commission) calculations published in the Mining Journal (No. 6289, 1959, pp. 258-260) uranium produced by mining industry in all countries is worth 500 million dollars of which 200 million dollars is the share c the USA. During 1953-1956 about 80% of the known deposi of uranium ores in the USA were surveyed. However far from all deposits have been discovered. The reserves of thermoneuclear fuel are even greater. It is enough to say that the water, covering three-fourths of globe's surface (the volume of which is 1.4 billion cub. km.) contains 300,000 cub. km. of heavy water (0.02% by volume) which necessary for the production of deuterium. 0.0065% of the earth's crust is lithium, the source of obtaining tritium. These kinds of atomic and thermonuclear fuel alone are sufficient for the needs of tens and hundreds of thousands of years. This means that under communism the possibil ties of developing production are practically limitless.

But not only is the size of the new sources of energy important. The thermal capacity of nuclear fuel is millions of times higher than the capacity of ordinary fuels, and sc for the production of a certain amount of energy much les nuclear fuel is necessary as compared with ordinary fuel This circumstance is of great importance for the location of industry which becomes independent from the sources of mineral fuel and hydroenergy.

Engels wrote that even under capitalism production becomes less and less dependent upon the local sources of raw materials, while under socialism society will create a new productive power which will balance out the expense of transportation of raw materials and fuel from far away points. This prediction is being fulfilled. With existing expenditure of labor on the production of atomic fuel exploitation of a large atomic electrostation (100,000 to 200,000 kw capacity) in a number of regions is cheaper th the exploitation of electrostations using "imported" fuel. The smaller the expenditure of labor on nuclear fuel, the wid the possibilities of building electrostations in any region of the country. According to a statement in the magazine Wirtschaftdienst (No. 6, 1956, pp. 318-321) atomic electr stations, consuming insignificant amounts of fuel in term of weight (tens of kg for the production of 100 million kwh instead of 50,000 tons of coal) should be built in the place of power consumption which have no local fuel or such kinds which it is better to utilize in the chemical industry The prospect of industrial utilization of thermonuclear energy, a problem occupying scientists in the USSR and other countries, is even brighter. The realization of controlled thermonuclear reactions with the help of gas discharges may be considered as quite feasible.

The independence of concerns from local sources of energy and the almost equal cost of production of atomic energy as compared with electric energy produced with conventional fuels at any point — this is the basis for the planned distribution of industry under communism, of comprehensive complex development of production in all regions.

The task of the economists is to determine conditions for the effective application of atomic energy, stages of i utilization, to find variants of the most advantageous cation of atomic power installations in respect to the clus- rs of industries and other consumers of energy. Scientific rk in that direction has just begun. We have to consider re the most varied factors. Presumably the cost of the ineral fuel will grow because of the necessity to mine yers lying deep below. It becomes evident that even in the ture the coal needs of the European part of the USSR can- t be satisfied with Donets and Pechora coal, while trans- rtation of Karaganda or Kuzbass coal is expensive. The nstruction of large atomic power stations in many re- ons of the European part of the USSR (especially in the eningrad and in general in the Northwest as well as in ranscaucasia) which do not have their own fuel base, is visable even now. The construction of atomic power sta- ons in Armenia will make it possible to stop lowering the ater level of high, mountainous lake Sevan for power rposes and save one of the most beautiful lakes in the orld. The development of atomic power will make it possi- e to reduce the cost of mining mineral fuels and give up avy physical labor in the coal mines. The reduction of penses in coal transportation, which makes up from 25 40% of the total amount of freight of our railroad and ater transport, will be of great importance. This will ake it possible to increase greatly the transportation of her goods and achieve a substantial economy in capital vestments and in the development of the traffic capacity the railroads. The use of atomic energy in transporta- on will be especially effective in the sea-going vessels ich now have to carry large amounts of fuel. Atomic wer installations will allow us to increase the speed of e trains. For the same reason the application of atomic ergy in air transport will be quite effective. It will be ss effective on railroad transport because it is easy to pply locomotives with power through a contact network with fuel at terminals.

The development of atomic power is closely connected th electrification. It is advisable to transform atomic ergy at the electrostations into electric power and then supply it to the consumers. Electropower has great lvantages over other kinds of energy — divisibility, re- rsibility, application for various technological purposes, ansportability and production in any needed quantity. lectrometallurgy, electrochemistry, electrowelding, high equency welding, electrosparking and ultrasound process- g of metals and other materials are being applied more d more. Electrodrive is of tremendous importance in dustry. Electroenergy sets in motion various appliances d mechanisms from gigantic blooming mills, walking cavators and electric locomotives to small tools for aking watch details or shears used for sheep clipping. % of the modern fleet of construction machines have ectric drive. Annual production of power in the USSR the next few years will reach 300 billion kwh, equal to e physical work of 850 million men. Electric energy is plied widely in production and in households and in the ture will be applied even more than now. Besides atomic ergy other sources of energy — coal, cheap coal from en cut mines in Eastern Siberia, natural gas, hydro- ergy, etc. will be used more and more. The task of the onomists is to determine the correct ratio between rious types of fuel, between various sources of energy. is would help to lower wherever possible the expendi- re of social labor, to increase the rate of growth of the cial product.

The importance in technology of semiconductors, with e help of which it is possible to transform alternate cur- nt into direct current and solar energy into electric ergy, is growing. This makes it possible to reduce the size of electric units thousands of times to place a radio receiver in a hand watch case, to reduce to 1/100 or 1/1,000 the size of the induction coil and condensors. These new appliances will increase the possibilities of using electric energy in industry and homes.

A technical revolution in some branches brings about a similar revolution in other branches so that the whole of social production is transformed. Automation, mechanization and electrification in industry will be of tremendous importance for further progress in agriculture. Our agriculture is a highly mechanized branch. It uses hundreds of thousands of trucks, tractors, and combines; mechanization is being widely applied in livestock breeding. Yet the number of machines in agriculture is not yet sufficient; there are not enough fertilizers and there is too much manual labor. On the whole labor productivity in agriculture is lower than in industry.

Great changes in the mechanization of agriculture are connected with the reorganization of the MTS. Mechanization of the production processes in agriculture which have a mass character will make it possible to free a large number of workers for the construction of production buildings and houses, for the repair of machines and cultural services for the population. We must remember that our agriculture employs several times more workers than that of the USA, while the volume of agricultural product per capita of population in the USA is more than twice that in the USSR. The labor productivity of agricultural workers must be increased many times. The material and cultural standards of life of the agricultural population should be brought up to the standards of life of the urban population in order to overcome serious differences between the cities and the villages. Mechanization, chemicalization and electrification of agriculture and the development of transport will help in that respect.

Economic science has to analyze the economic side of the further technical reconstruction of agriculture. It is necessary to show the stages of its transformation and not only the final goal and give an estimate of the expenditures which will be necessary for the technical reconstruction of agriculture and for the raising of the material and cultural standards of the rural population.

The influence of chemistry on the development of agriculture will be expressed on the one hand in the greater application of fertilizers and other stimuli for plant growth, on the other in the development of chemical methods of production of goods now obtained from agricultural raw materials. In the 20th century the production of fabrics from artificial fibres has become well developed. At the present stage of development of chemistry fabrics made of silk, wool, flax or cotton may be replaced with synthetic fabrics which now have all the qualities of the natural fabrics and are even better. But the production of synthetic fabrics requires from 5 to 10 times less labor than the production of fabrics from natural fibres. In the last six years production of synthetic fibres in the capitalist countries increased five times and exceeded 400,000 tons. Footwear, furs and other consumption goods can be produced by chemical methods and the quality of such goods is not only not lower, but frequently is even considerably higher than the quality of goods produced from animal and vegetable raw materials, while costs are considerably lower. Of great importance will be the replacement of many food products, now used for technical purposes, with synthetic products. In 1957 in the USSR production of alcohol required 2.5 million tons of grain and about one million tons of sugar molasses. Every year about 500,000 tons of foods are used in the production of soap, cleansing agents, drying oil, etc. In 1955 the production of household soap required more than 300,000 tons of vegetable oil in the USSR. In order to produce this quantity of oil we have to sow, cultivate, and harvest sunflowers on an areas of 1.5 million ha, use the work of 100,000 workers, 30,000 tractors, 5,000 combines, and thousands of trucks. But the same results can be obtained through the production of synthetic fatty acids and alcohol. All these measures will make it possible to reduce expenditure of agricultural products for technical purposes, to use the saved products for consumption and to increase the production of various agricultural products.

The rational use of the wastes of production and the reduction of all kinds of losses will become an important source for increasing production during the transition from socialism to communism. At present in burning firewood, saw dust and other waste products of wood processing, in burning coal and petroleum gases, we lose great amounts of valuable raw materials from which a great amount of chemical products, building materials, etc. can be obtained. Utilization of only one-half of the petroleum gases lost in the extraction and processing of petroleum would be sufficient to produce one million tons of ammonia and 650,000 tons of acetylene from which, again, can be produced one million tons of ethyl alcohol. This would mean a saving of 4.5 million tons of grain or from 10 to 12 million tons of potatoes. Through a very simple processing the wastes of wood can be turned into first rate materials for making furniture and other goods and also for construction.

A complex utilization of materials and energy in industry should be widely developed in the future and this would strengthen the raw material base of industry.

The successful development of chemistry opens up great possibilities for the production of new materials, hard and super-hard alloys and super-heat-resisting materials. The production of pure germanium, gallium, ziconium and other rare earth metals is of great importance for technology. In the United States in 1956 their production reached 1.8 million tons and occupied 200,000 workers. The base of their production is formed by the products of petroleum refining and natural gases. These basic materials are very abundant in the USSR and we can sharply increase the production of plastic masses, in order to catch up with the United States and then to overtake it.

During the period of transition from socialism to communism all kinds of transport will be developed further. This is an important condition for the growth and perfection of social production. Without powerful transport we cannot master in an historically short time the tremendous natural riches of Eastern Siberia, the Far East, the North and oth regions of the country; and their mastering is necessary for the achievement of the planned high level of productio The development of transport must go ahead of the growth of production, creating favorable transport conditions for mastering new regions. Under communism the needs in the means of transport for the movement of the freight and men should be satisfied fully and without any hitch. Especially great will be the development of new kinds of speedy and uninterrupted transport — aviation, pipe lines, long distance transmission lines of super high voltage, containers, etc. Speeds of 1,000 km an hour and more wil become common for the air lines.

The economists must find proper ratios between the development of transport and other branches of the economy as a whole and in respect to regions. The criterion here is the smallest expenditure for the production and transportation of products, which means the smallest expenditure for the consumer. The same criterion will help us to find the proper ratios between various kinds of transport.

We may expect that in the long run, as production grow it will become possible to solve great international econo problems the purpose of which is a radical improvement in the conditions of human life. We speak here of changes in the direction of rivers, irrigation of deserts, the use of the energy of tides and changes in the climate of the globe Calculations show, for example, that if we prevent cold currents from the Arctic reaching the Atlantic, we can change the direction of the Gulf Stream. This would make it possible to melt the permanent ice cap of the north and in this way make the climate of the whole northern hemisphere warmer. This would not only change the flora and fauna of the region of permanent ice, but would considerab improve the thermal balance of our planet and at the same time would create more favorable conditions for the development of the whole of human society. In order to carr out this plan it would be enough to spend half of the sums which members of NATO spend annually on armaments. With the beginning of the conquest of space the possibilitie that are being opened before mankind are practically limitles

With the development of technique man's conquests of nature increase, he becomes its master and creates conditions for the further improvement of production relations, for the transition from socialism to communism. The tas of the economic sciences is to place a solid economic bas under the means and stages of building the material-technica base of communism.

. Pankratov:

he Coming Revaluation of the Basic Funds

As is known, all state and cooperative (but not kolkhoz) ncerns and organizations have to carry out by January 1, 60, a revaluation cf all basic funds on which depreciation arges are made and determine the degree of their wear l tear.

The necessity to revaluate the basic funds is called for the fact that at present at many concerns the means of oor are differently valued and their evaluation does not rrespond to their present cost of reproduction. As a re- lt of this the depreciation of the basic funds, calculated the basis of the balance sheet data, does not reflect the tual degree of wear and tear, while the charges of de- eciation calculated on the basis of wrong rates, result in listortion of the actual expenses of production in violation the principle of cost accounting. Differing evaluations of basic funds also result in the fact that the depreciation serves are insufficient for the reproduction of the basic ds at the concerns where these funds are evaluated too v, while they are excessive in the concerns where the sic funds are evaluated too highly.

Moreover, differing evaluation of the basic funds in the ncerns where production is similar in character makes re difficult the planning, comparison and analysis of the st important economic indices showing the effectiveness the basic funds utilization (output per 1,000 rubles of sic funds, or per 1,000 rubles of production equipment, .).

Under existing conditions when most important economic lices of the effectiveness of the utilization of the basic ds are not available, the guiding personnel of the eco- mic councils and the directors of the concerns do not end much time (or spend no time) on analyzing the state l utilization of the basic funds, on the study of the causes idleness and unsatisfactory use of the equipment. In w of this it is not accidental that excessively high figures shown for the so-called equipment reserves on the ance sheets of many concerns. Thus, on January 1, 1958, total amount of such equipment in the concerns of Mos- v City was estimated at 177.8 million rubles and in the ncerns of the Moscow Regional Economic Council — at 3.9 million rubles. The coming revaluation of the basic ds would create conditions for using in planning prac- e the most important index — the effectiveness of utiliza- n of the basic funds per 1,000 rubles of gross product. ch an index is the most important means in the struggle the maximal use of the basic funds. Under the new con- ions all basic means of the concerns will be evaluated their cost of reproduction.

Beside the above-mentioned defects of the existing meth- s of evaluation of the basic funds the rates of the depre- tion charges applied by the concerns are to a consider- e degree obsolete and do not correspond to the technical el of production and do not consider in a sufficient de- ee the necessity of modernization and replacement of machines and equipment because of technical progress. view of this the USSR State Planning Commission, in laboration with the corresponding ministries, depart- nts, and economic councils, worked out the new rates of depreciation charges according to the new classification scheme of the basic funds based upon the intensity of their use. These new rates should ensure restoration and capital repairs of the basic funds, including obsolescence.

The revaluation of the basic funds and the preparation of the new rates of depreciation charges are closely connected with each other. They are directed at the solution of the most important economic task — ensuring a normal reproduction of the basic funds and their fullest use as well as ensuring that the basic funds will be preserved and cost accounting in all branches of industry and in the national economy as a whole will be strengthened.

Only basic problems and general reorganizational and methodological questions of the coming revaluation of the basic funds are considered in this article. The USSR CSA, together with the USSR State Planning Commission, USSR Ministry of Finance, the USSR State Construction Commission and many industrial branch research and designing institutions are now working at the solution of these questions. A number of organizational and methodological matters of principle have been successfully solved.

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As was mentioned, the revaluation of the basic funds according to their state on January 1, 1960, should be made by all state and cooperative (excluding kolkhoz) concerns and organizations which have to make depreciation charges on their means of labor. Consequently revaluation will apply to all basic funds for which depreciation reserves have to be formed. However, the basic funds of concerns and organizations supported through the state budget as well as social organizations which do not have to form depreciation reserves, will not be revalued.

The state concerns and organizations which have to form depreciation reserves for the basic funds have to revalue buildings and structures, all kinds of equipment (including reserve equipment, equipment "in moth balls" and leased-out equipment), means of transportation, and housing funds. Equipment of such concerns and organizations which is shown on the balance sheet of their basic activity as manufactured goods or in the balance sheet of the capital investments as equipment delivered for the assembly or to be assembled will not be revalued because it is not part of the basic funds.

In order to simplify the work of revaluation of the basic funds as well as because of their relatively small value, all office equipment, implements, working and breeding cattle, all means of horse transport and library funds which are a part of the basic funds will not be revalued. Also all kinds of instruments and fittings the length of life of which, as a rule, is short and which in fact are shown on the balance sheets of the concerns according to their present value, will not be revalued. All this would allow the personnel of the concerns and organizations to concentrate their attention on revaluation of the most important means of labor which make up more than 90% of the total sum of the basic funds.

Revaluation of the buildings and structures should be done by large units such as an average value of one cub. mt. of a building, one cub. mt. of a blast furnace, one linear mt.

of a pipe line, etc. In individual cases it is possible to carry out revaluation of the buildings and structures with the aid of average coefficients of changes in their value. Revaluation of machines, equipment, and rolling stock will be done on the basis of the existing wholesale price lists plus the expenses of their delivery, assembly, and installation, that is, at their present replacement value. Domestic obsolete equipment which is not produced anymore, as well as imported equipment, must be revalued on the basis of prices of similar modern equipment with necessary corrections for the capacities and obsolete character of the design, that is, taking into consideration obsolescence.

In order to guarantee a correct and uniform revaluation of the basic funds in all branches of industry and the whole national economy, the USSR State Construction Commission in cooperation with the ministries, departments, and industrial branch designing organizations prepare the necessary lists of values by large units of buildings and structures. These lists must be published by the USSR State Construction Commission not later than March 1, 1959. In order to insure the uniformity of revaluation of machines, equipment, and rolling stock, the USSR CSA, in cooperation with the corresponding ministries, economic councils, research and designing organizations, prepares price lists. These lists will enumerate full replacement costs of the machines, equipment, and rolling stock now produced and those which are not produced anymore or were imported. The full replacement value of the machines, equipment, and rolling stock now in production will include (a) a wholesale price according to the price lists, while for individual equipment for which the price approved by the government is not available, a price approved by a ministry or by an economic council; b) the value of the procurement and warehouse expenses at the approved rates; c) the cost of the assembling; and d) the cost of the foundation (in the branches of industry where expenses of foundation are not included in the cost of the building or the structure); the cost of the container or crating (when this is not included in the wholesale price) according to the existing price lists and prices agreed upon between the delivering and receiving concerns. The price lists will also show the replacement cost of the machines, equipment, and rolling stock which are no longer produced by our industry or were imported. Their value will be fixed on the basis of prices for similar equipment with corrections for the differences in the production capacity and for the obsolescence of the design. Such price lists should be published by the USSR CSA no later than April 1, 1959.

In accordance with the government decision 110 industrial branch research and design institutes are taking part in the preparation of the price lists for machines, equipment, and rolling stock. The basic problem in their preparation was the problem of finding the proper method of determining the technological obsolescence of the machines and equipment no longer produced. The solution of this problem was complicated by the fact that up to recent times there was no unity among the economists about the category of technological obsolescence and methods for its determination.

As is known, technological obsolescence of the first kind is depreciation of the basic funds because of the improvement in the methods of reproduction so that the construction of machines of this kind of design is now cheaper and they may be bought at lower prices than the old machines of similar design. Technological obsolescence of the second kind is the result of appearance of the new, more productive machines which, as a rule, are more economical.

In determining the degree of obsolescence for machines no longer produced some economists suggest considering only obsolescence of the first kind and the lowering of thei productivity in the second kind, ignoring other economic indices. We believe that such a method of determining th general degree of obsolescence is wrong: in view of the obsolescence of their design such machines are no longer manufactured; they not only become less productive than the new machines, but the expenses of production per unit of the product are, as a rule, higher than in the case of new machines, and they are higher not only because of th increased rate of depreciation charges (which under cert conditions may not be the case) but because of the increa cost of other components (expenditure of materials, numb of workers servicing the machine etc.).

Thus obsolescence shows which machines are now economically disadvantageous and should be replaced with ne ones, which are better from the technical point of view. I view of this, while determining the degree of obsolescenc we cannot ignore economic indices, if it is possible to calculate them.

However, even if in the process we find considerable ol solescence in some machines, this does not mean that su machines or equipment should be written off the balance sheet as obsolete or unprofitable in production for which they were designed. In deciding this question we must consider whether the new machines fully ensure the rate of growth of production not only in a particular concern, but in the national economy as a whole. Moreover we sho consider the possibility of using the obsolete machines or equipment of mass production in auxiliary processes (RT repair-mechanical sections, etc.) or in kinds of productio where the highly productive machines or equipment are n required. Consequently, in order to ensure the fullest an most proper use in the national economy of all available production capacities, the obsolete machines and equipme may be written off the balance sheet only if it is impossi to use them more productively at some other sector of w

Finding uses for obsolete machines or equipment does not mean, of course, that the degree of their obsolescenc expressed in money terms should not be reflected in the revaluation of the basic funds. The degree of obsolescen of the machines or equipment which are not produced anymore, should be reflected in money terms in the revaluation of the basic funds independently of the question wheth they can be further used in the national economy.

The price lists which are being prepared by the resear institutes for the coming revaluation of the machines, equipment, and rolling stock, naturally, cannot have a single, standard formula for the determining the degree o machine obsolescence. Obsolescence of the second type will be determined in some cases by a comparison of productivity and of the full planned cost of the unit of goo produced by a machine, in other cases — through a comparison of the productivity of the machines and of the ma item of cost involved (for example, fuel); sometimes — through a comparison of the productivity or the capacity of the machines, if economic indices show only an insigni cant deviation.

Let us consider some examples in determining the deg of obsolescence of machines, equipment, and rolling stoc A ZIS-5 truck of three tons freight capacity and a balanc value of 10,200 rubles is revalued by analogy with a new ZIL-150 truck with a freight capacity of four tons and replacement cost of 14,4000 rubles. The planned cost of a ton-km of freight haulage for a ZIS-5 is 0.6346 rubles an for the ZIL-150 truck 0.4837 rubles. The value of the ZI truck would then amount to 14,400 x 3 x 0.4837: (4 x 0.63 8,232 rubles, while the total obsolescence of this truck money terms would amount to 1,968 rubles (10,200-,232).

While it is impossible to determine obsolescence for ome rolling stock, for example tractors, because we do ot know the cost of work per ha or some other index in uch a case we may consider the expenditure of fuel acording to the standard, that is, the basic kind of expendiure which changed because of the improvement in design f the new tractors. For example, a CTZ-NATI tractor, of 2hp and the expenditure of 315 gr of kerosene per hp per our (in money terms 0.110 rubles) has to be revalued by nalogy with a new DT-54 tractor of 54hp and the expendiure of diesel fuel of 220 gr. per hp per hour (in money erms — 0.077 rubles) and replacement value 16,000 rubles. he replacement value then of the CTZ-NATI tractor conidering its obsolescence, would amount to 16,000 x 52 x .077: (54 x 0.011)= 11,189 rubles.

In cases when economic indices of the obsolete machines iffer little from the corresponding data for the new mahines and the only real difference lies in their productivity, hen their replacement value which would account for their bsolescence would be determined by a comparison of their espective productivities. Thus the replacement value of P-66 spinning machine producing 658 kg-count of yarn er hour, when revalued by comparison with a new P-76-1 pinning machine, the productivity of which is 680 kg-count f yarn per hour and replacement value of 41,110 rubles vill amount to 41,110 x 658:680= 39,780 rubles.

The replacement value of the modernized equipment hould be determined through a comparison of the new echnical-economic indices achieved as a result of moderniation with the old ones. If modernization of the equipment s not completed by January 1, 1960, the replacement value f such equipment may be determined by a comparison with imilar modernized equipment, on the basis of the actual echnical-economic indices before modernization.

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The second important problem in preparing data necesary for carrying out revaluation of the basic funds is the ormulation of the proper recommendations for the concerns nd organizations as to how to determine the physical wear nd tear of the basic funds. The problem here has two acets: on the one hand we should not make the work of deermining the wear and tear of the basic funds of a concern oo complicated; on the other hand we should not allow disortion of the real degree of fund wear and tear.

In the prepared instructions three methods of determining he physical wear and tear of the basic funds are given:) through examination of the technical state of the object s a whole; b) through examination of the technical state f the most important elements of its design (units, parts);) through determination of the wear and tear by the length f object's use or by the actual amount of work done by it. he first two methods are generally recommended. In etermining the degree of physical wear and tear of the asic funds we have to consider the most important factors nfluencing the rate of wear and tear, namely: operating onditions of the basic funds, conditions of storage, the ind and the quantity of materials from which the basic unds are made, their natural condition, etc.

Determination of the degree of wear and tear of the asic funds through examination of the technical state of he object as a whole or of the elements of its design (units, arts), must be done through an external examination withut stripping, unearthing, perforating, etc. If the object, or he elements of its design, is hidden fully or partially and o cannot be examined externally, the degree of wear and ear must be determined on the basis of technical examinations (investigations) done before, repair records and reports about defects.

Determination of the degree of wear and tear (in percentages) by the length of the object's service is allowed only for buildings and structures recently built (within the last five years), for uniform objects of mass production (sleepers, telegraph and telephone poles, etc.), for submerged and underground structures (pipes, cables, etc.), for which an external examination is impossible, for working and breeding animals, inventory and implements, and for the permanent plantings. We should remember here that determination of the degree of wear and tear of the object by the length of its service is permissible only in case of normal exploitation. But if the object suffered destruction as a result of a natural calamity, was damaged in an accident or through some other causes and then restored or reconditioned, the wear and tear of such object must be determined on the basis of examination of its actual technical state.

Determination of the degree of wear and tear by the length of the object's service is determined by the following formula: W=A:L x 100 or W=A:(A+R) x 100 where A is the actual length of service (age) of the object or the actual volume of the work performed; L — the length of service or the full volume of the work during its length of service at the established standards; R — the remaining life of the object or the remaining volume of work to be performed according to expert examination. The second formula may be applied to the object the life expectancy of which is long; mainly for those objects the length of service of which has expired. The degree of wear and tear judged by the technical state of the most important elements of the object's design is determined as an arithmetic average, weighed by the value of such elements in the total replacement value of the object.

The relative weight of the most important elements of the design in the total replacement value of complex machines and equipment will be given in the price lists for the revaluation of machines, equipment and rolling stock, now being prepared at the economic research institutes.

The degree of wear and tear of an object which underwent capital repairs must be determined after taking into consideration this work of restoration. If at the moment of revaluation of the basic funds (January 1, 1960) the capital repairs have not yet been completed, then the physical wear and tear must be determined on the basis of object's technical state before the capital repairs.

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Publication by the Center of the large unit values worked out by the USSR State Construction Commission for the revaluation of buildings and structures and the price lists prepared by the USSR CSA for the revaluation of machines, equipment and rolling stock undoubtedly will considerably simplify the work of the concerns and will make possible uniform and correct evaluations of buildings, structures and equipment similar in design and specifications. However, the availability of such instructions is not sufficient for the timely and proper carrying out of the revaluation of the basic funds. As the spot checks show, the state of accounting and operative-technical control of the basic funds at many concerns (for example, the Lomonosov plant in Leningrad, the DOR chemical plant in Moscow, the No. 1 plant of ferroconcrete constructions in Moscow) is unsatisfactory. The main defect of basic funds accounting is the absence of materials characterizing the object. For example, in order to be able to revaluate any building according to the large unit values given by the USSR State Construction Commission it is necessary to know the cub. mt. volume of the building, the character of the foundation, the materials of which its walls and ceiling are made, etc. In order to ensure proper and timely revaluation of the buildings we should first of all have the floor plans and the characteristics of the basic funds on the basis of accounting and operative records. For the revaluation of the equipment we should know the name, type, and trade-mark, its basic technical indices of productivity or capacity, clearances and weight. In addition for complex equipment we should have also data about the aggregates of which it consists. The availability of such data will ensure timely and proper revaluation of buildings and equipment of any concern.

In order to ensure proper recording of the basic funds, the ministries and the departments, the economic councils and local Soviets must now carry out the necessary organizational work in all concerns and organizations within their jurisdiction. Directors and chief accountants of the concerns and organizations must immediately check the state of their statistical and technical records for all basic funds and appoint special persons responsible for bringing order into technical, statistical and other classified records. If at some concern or organization technical records for a building, structure, or equipment are not available, such records may be found in some other organization (a city bureau of inventory, an office of boiler inspection, etc.) and copies obtained. If it is impossible to obtain technical records from other organizations, it is necessary to take measures to prepare brief technical records by the personnel of the concern. The basic funds which have become worthless should be written off the balance sheet through an established procedure.

The coming annual inventory of the basic funds (beginning with November 1, 1958) will play an important role in the preparation of the revaluation of the basic funds. This inventory must be organized and carried out with special care. During the period the necessary technical characteristics of all inventory objects and their original cost should be shown on the inventory cards or books and the correct classification of the inventoried objects in the accounting records by their technical-production purposes as well as the classification of the basic funds should be made more precise.

Special attention should be paid to the correct description of the characteristic features of the complex equipment and of the basic aggregates of which it consists as well as to finding the cost of technological supply ducts (pipes), metal constructions and measuring gauges. The fact that the basic funds have undergone reconstruction, reequipment, or modernization as a result of which their characteristic have changed, such a fact must be included in the inventor reports, technical records, and inventory cards and their new prices and technical data should also be shown.

Simultaneously with the above mentioned preparatory work to be carried out at the concerns and organizations, the USSR CSA soon will finish preparation of the instructions concerning the procedure of revaluation and determination of the degree of wear and tear of the basic funds at the concerns and organizations. In these instructions all basic organizational and technological questions will be explained. Beside these instructions the CSA is preparing primary record forms for carrying out the inventory, revaluation, and determination of the degree of wear and tear of the basic funds and these will be published togethe with instructions not later than April 1, 1959. The forms of reports concerning the results of revaluation and the determination of the degree of wear and tear for the basic funds will be published by May 1, 1959.

Considering that the coming revaluation of the basic funds by January 1, 1960, according to the decision of the government, should be carried out between September 1 and October 31, 1959, on the basis of the general inventory of the basic funds, that is, during the period coinciding wit the period of the annual inventory of the basic means, whic should be carried out by all concerns and organizations on November 1, each year, it is assumed that the annual inventory will not take place in 1959. Inventory work carrie out by the concerns and organizations in connection with the revaluation of the basic funds will be at the same time the annual inventory necessary for the 1959 annual reports

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Timely and proper carrying out of the general inventory and of the revaluation of the basic funds will make it possible to carry out revaluation of the basic funds by all concerns and organizations. This will help realization of the normal reproduction of the means of labor, greater application in planning practice of the most important economic indices characterizing the effectiveness of the use of the basic funds and will strengthen cost accounting throughout the national economy.

Ensuring the high quality of the revaluation of the basic funds in the required time is the most important duty of the leadership of the ministries, departments, economic councils, and concerns.

E. Bregel:

The Bourgeois and Revisionist Theories of A "Mixed Economy"

On the basis of a profound analysis of the laws of develpment of the capitalist mode of production, Marx came to ne conclusion that a revolutionary transition from capitalsm to socialism is inevitable. For quite a time the boureois economists attacked this most important thesis, tryng to deny the inevitability of the revolutionary overthrow f capitalism. The most skillful apologists declare that nodern capitalism has undergone structural changes as a esult of which "the injustices of the old capitalism" are eing removed and that historical development in general eads not to the sharpening of capitalist contradictions, but the emergence of a "mixed economy" under which diferent elements peacefully coexist while the basic features f capitalism are preserved.

Following the bourgeois economists, the revisionists igorously preach the theory of a "mixed economy," though their case it becomes closely tied up with the theory of ne right socialists about the "peaceful growing of capitalsm into socialism."

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The theory of a "mixed economy" made its first appearnce at the end of the 19th century. Its beginning can be learly traced to the adherants of "state socialism," one f the currents of bourgeois political economy in the second half of the 19th century. For example, Adolf Wagner in is work "Grundlegung der Politischen Oekonomie" (1876) rmulated an idea of a "mixed economy" quite clearly. ccording to him, the existing national economy is a comination of three different economic systems: a private conomy; a social economy (including the state economy); nd an eleemosynary economy. He wrote: "It is hardly ossible — not to mention that it is historically impossible — that a national economy can exist which would be based xclusively on one or even on two organizational principles; here is always a combination of them. The national econmy as a whole rests exactly on such a combination..."(1) Vagner's statement about a combination of different socioconomic systems was directed straight against Marx's hesis on the inevitability of the revolutionary transition rom capitalism to socialism. He advanced his own thesis hat social development is not proceeding from capitalism socialism; that there always has been and will be a kind f a mixed economy.

Though the theory of a "mixed economy" had made its ppearance long ago, it was fully developed only during ne period of the general crisis of capitalism.

Historically the soil on which the modern theory of a mixed economy" grew up was the development of statenonopoly capitalism. World War I brought a many-sided interference" of the state into economic life in the intersts of monopoly capitalism. In the post-war period this interference" at first weakened and then, as a result of ne world economic crisis of 1929-1933, again sharply ncreased. In a number of countries the bourgeois state egan to carry out massive financing of capitalist corporaions through the state budget in order to save them from ankruptcy, and in some countries it even purchased shares f industrial concerns and banks.

World War II brought a further growth of state monopoly capitalism. Under war conditions, government war orders which ensured tremendous profits to the monopolists were widely used. A system of state war-time "regulation" of the economy was created. Its components were: government control over the distribution of raw materials in short supply; control of prices and wages; militarization of labor; rationing of consumer goods; rigorous control of foreign-exchange operations, etc. Since World War II, state-monopoly capitalism has not disappeared completely. The new armament race, and large state military contracts connected with it; the increasing share of the national income going into the state budget, the growth of capital export at government expense, the personal union of the financial oligarchy and the bourgeois state apparatus; and the subordination of the latter to the interests of monopoly capitalism — such are the characteristic features of modern state-monopoly capitalism.

The bourgeois theory of a "mixed economy" under modern conditions is, first of all, an apologia of state-monopoly capitalism. Placing the bourgeois state in opposition to private enterprise and presenting the state as an organ above classes which aims to ensure general prosperity, the partisans of this theory attempt to present modern capitalist economy as a combination of a "private sector" and "a state sector" and consider such a "mixed economy" as the best medicine against all ills of capitalism — unemployment, crises etc. — as well as an antidote to the threat of socialist revolution.

This theory received its greatest circulation among the bourgeois economists of the United States, its prominent representatives being Stuart Chase, Alvin Hansen and John Maurice Clark.

Stuart Chase developed his theory of a "mixed economy" before World War II. He presented it in his books "Government in Business" (1935) and "The Tyranny of Words" (1938), written under the influence of the economic crisis of the thirties. In one of his books he compared the American economy with a car which sped at 80 miles an hour and fell into a ditch, was dragged out by an emergency crew, put together in haste, but remained greatly damaged and unable to run again. To cure the sick American economy, Chase suggested a "mixed economy."

Chase's basic theses were (1) in all countries there is a tendency towards the growth of economic activity of the state; (2) this means a gradual transformation of the economic system from a system of free private economy into system of "mixed economy;" (3) in the private sector, the moving spirit of business activity is the pursuit of profit; in the state sector, the good of society; (4) the private and the state sectors of the national economy are mutually complementary.

The term "capitalism" for Chase is an empty abstraction. What is real, according to him, is a "mixed economy." He wrote: "Putting aside the opposing labels 'capitalism' and 'socialism' and investigating the real world of economic activity we find: 1) concerns where the majority of decisions are made by the officials acting under authorization of the law, like the post office; 2) concerns where the majority of decisions are made by private entrepreneurs like a shoe-shine stand; 3) concerns where decisions are mixed. According to an estimate, the last category covers 95% of all business activity in the United States."(2)

Chase connects the transformation of private economy into a "mixed economy" with changes in the functions of the state. In his opinion, "The traditional function of government as protection and so more or less negative, has shifted to the positive function of Wirtschaft" as a result of which "the prevailing economic system as a whole is visibly undergoing more or less violent transformation."(3)

In its most developed form, the theories of a "mixed economy" are presented by Chase in his post-war work "For This We Fought." Here Chase distinguishes four "models" of economic systems in society: 1) an unregulated mixed system; 2) a regulated mixed system; 3) an automatic competitive system and 4) an authoritarian state with centralized planning. He rejects the last two systems, asserting that a return to free competition and market "automatism" is impossible, while the system of centralized planning is unacceptable. Thus, according to Chase, there remains for the United States a choice between two species of a "mixed economy."

Chase declares: "We can continue our prewar 'mixed' system as heretofore, with government, business, labor unions, farm blocks, cooperative associations, non-profit enterprises all making important decisions, and all struggling for power without much sense of direction."(4) However, Chase considers such an "unregulated mixed system" "too obsolete," seeing as its main defect its inability to prevent crises and unemployment. Contraposing this "unregulated mixed economy" to the regulated one, Chase wrote: "We can continue our prewar economy, but not, however, as heretofore. Contrary to past performance, we can really plan it with some intelligence and foresight... In this model a group of citizens in the Administration and Congress would be made continuously responsible for keeping the economy on a reasonably even keel."(5)

Among the most prominent and zealous partisans of the theory of "mixed economy," we find the leader of American Keynesianism, Alvin Hansen. In his recently published work "The American Economy" Hansen declares: "Private enterprise is stronger, more buoyant, more dynamic today in all Western Europe and also in the United States than it was in the interwar period. It was not a transition from private to public ownership. It was a transition from an individualistic economy to a mixed public-private economy with emphasis on social welfare."(6)

The thesis of the transformation of the modern bourgeois state into a welfare state became widely accepted by the modern bourgeois sociologists and economists. Hansen emphasizes that the welfare state should not be identified with socialism, because in such a state there is no social property in the means of production or state management of the concerns. According to his definition "the welfare state is primarily a redistributor of income and a colossal purchaser of the products of private enterprise."(7) The functions of this state consist of ensuring general welfare with the help of a progressive income tax, social insurance, a program of aid to farmers etc., in this way reducing social inequality and, at the same time, maintaining through its expenditures economic prosperity and full employment.

Ascribing such a role to the state, Hansen advances a thesis on the possibility and the necessity to delineate strictly the spheres of state activity and private enterprise within the framework of a "mixed economy." In his opinion the state should spend large sums for the maintenance of the aggregate demand and stimulation of production and employment, while businessmen should produce goods. "The government makes large expenditures, but private enterprise does the job."(8)

Among the pillars of American bourgeois political economy we have also John Maurice Clark who takes the same position on a "mixed economy." Like Chase and Hansen, he considers that modern capitalism is undergoin a transformation in the direction of the growth of the state economic role.

Apparently with even greater zeal than the two others, Clark publicizes the economic functions of the bourgeois state. He advances a thesis about "a revolution in the economic functions of the state"(9) that took place in the last decade and, according to him, "government is changin from a policeman to a positive-economic agency."(10)

The anti-Marxist character of Clark's theory of a "mixed economy" is expressed especially violently. In his book "Guideposts in Time of Change" (with a characteristi subtitle "Some Essentials for a Sound American Economy" Clark shows his extremely hostile attitude to Marxism an the socialist system of economy prevailing in the USSR. A the same time he shows great anxiety about the fate of cap talism. In his opinion the main task now is "saving our civilization" from the threat of communism.

Clark recognizes that the system of private enterprise i an obstacle to the development of production, that it brings unemployment and crises. Yet he considers that private enterprise should be preserved, though supplemented by economic activity of the state. On this basis there emerge a "mixed economy" capable, in his opinion, of removing th defects of capitalism while preserving its essence. Clark presents the further development of the capitalist economy in this way: "We choose evolutionary change, as preferabl to abrupt revolution, especially if the latter is violent. At present, we choose to maintain a system of private enterprise but not unchanged... This does not preclude the possibility of ultimately going farther, but it means...it would come by the gradual development of other kinds of agencie taking over more and more functions. They would need to learn how to do it without subverting the health of the private agencies, and the private agencies on their side woul need to be willing to do some adjusting. In short, it means a 'mixed system,' with a gradual change in the proportion of the mixture until — if private enterprise is to give way to collectivism — the public sector might be in a position to take over the major economic functions without shock."

Such are the views of three of the main American theor ticians of a "mixed economy." Similar statements can be found in the works of many other American economists, f example, Galbraith, Harris, and Lorwin. However, the theory of a "mixed economy" is a characteristic feature not only of American bourgeois political economy; it is widespread among the bourgeois economists of other countries.

In England, as in the United States, the theory of "mixe economy" is based on the economic theory of John Mayna Keynes. Recognizing that modern capitalism has certain defects, among which should be included chronic mass unemployment and economic crises, Keynes asserts that the defects can be corrected in the framework of capitalism through state regulation of money circulation, interest, de mand and investments. At the same time, Keynes himself emphasizes that his theory is "moderately conservative" and that its purpose is preservation of capitalism through "all kinds of compromises and methods of collaboration of the government with private initiative."(12) Keynesianism contained in itself an embryo of a "mixed economy"

eory, though Keynes did not work it out fully. In England
is theory was developed by Keynes' follower, William
everidge, and other economists.

The main defects of a "mixed economy" theory are 1)
ntraposing the bourgeois "public economy" to private
terprise; 2) distorted treatment of the economic role of
e bourgeois state; 3) equally distorted treatment of the
cial functions of the bourgeois state.

First of all it must be emphasized that the theory of a
nixed economy" does not consist of a simple statement
the fact of the state's interference in economic life.
nere is no doubt that in the capitalist countries the state
not neutral with respect to the economy. It actively in-
uences the economy through various methods, from pro-
ctive custom duties to building plants at the expense of
xpayers and to partial nationalization of industry, trans-
rt, and banks. However, the influence of the bourgeois
ate on the economy, and even its direct participation in
onomic life, is not yet a sufficient basis for declaring
e modern capitalist economy a "mixed," public-private
onomy as is done by Hansen, Chase, and others.

One could speak of a "mixed economy" only if the "private
onomy" and the "public economy" represented two dif-
rent types of economy, coexistent but different from each
her as a matter of principle. Otherwise the very concept
a "mixed economy" has no meaning. No one, for example,
oclaims capitalist economy a "mixed economy" because
ne-man enterprises and corporations coexist in it, though
questionably there is such coexistence. Consequently
nen the bourgeois economists place the individual owners'
ndcorporations'concerns in one sector and the "public
onomy" in another, they oppose them as different types
economy. But this is completely wrong. If we approach
e question not from the formal-legalistic, but from the
cio-economic point of view, then both private economy
nd bourgeois "public economy" should be included in the
me type of economy — capitalist economy.

Indeed, the type of economy is determined by the char-
cter of the property in means of production and, connected
th it, the character of the relations of the persons in the
ocess of production. In a private enterprise owned by an
dividual capitalist or a corporation, trust, etc. property
the means of production is capitalist. Property of the
urgeois state, as a matter of principle, also has a capi-
list character. If the state is a bourgeois state, making
e class domination of the capitalists effective, then prop-
ty of such a state is only a species of capitalist property.
roduction relations of the men in a concern of the bour-
ois state remain capitalist relations of exploitation even
ough, in this case, the role of the exploiter of wage
rners is played not by an individual entrepreneurs or
eir associates, but by the whole class of capitalists.

A profound and correct socio-economic analysis of
ublic economy" in the framework of capitalism was made
Frederick Engels. He pointed out that neither the trans-
r of the means of production into the hands of corpora-
ons and trusts nor their transformation into public prop-
ty destroys the capitalist character of production forces.
Modern society, whatever its form, is in essence a capi-
list machine, the state of capitalists, an ideal aggregate
pitalist. The more it takes productive forces as its
operty, the fuller its transformation into an aggregate
pitalist. The more the productive forces become its
operty, the fuller its transformation into an aggregate
pitalist and the larger the number of citizens exploited
it. The workers will remain wage earners, proletarians.
pitalist relations will not disappear; on the contrary,
ey will be brought to their extreme, to the highest point."(13)

State-monopoly capitalism not only preserves exploitation, but it also helps to intensify the exploitation of wage earners. First, in its own concerns the bourgeois state uses both economic and political pressure against the workers. Second, on a national scale the bourgeois state, through highly profitable military contracts distributed among the monopolies and through increasing the taxation burden of the masses, redistributes the national income to the advantage of monopolists and to the detriment of the toiling people.

The change in the average rate of surplus value may serve as an index of increased exploitation of wage earners under state-monopoly capitalism. In the United States as well as in other countries, the economic crisis of 1929-1933 and World War II greatly contributed to the development of state-monopoly capitalism. The average rate of surplus value in United States industry rose from 158% in 1929 to 200% in 1939 and 235% in 1955. Thus, the assertions of the bourgeois economists, that as a result of state interference a transformation of capitalism into a "mixed economy" took place, are completely groundless and distort reality.

Modern bourgeois writers, the partisans of the theory of "mixed economy," switch from an economic viewpoint to a formal legalistic viewpoint. This may be clearly seen in the example of the French writer Desqueyrat who, considering the ownership of concerns by the bourgeois state as a sign of "state socialism" writes: "We consider it arbitrary to use the same word, 'capitalism,' for the characterization of a regime relying on private law and for the characterization of another regime relying on public law,"(14) as if this or that "law" can radically change economic relations!

Modern bourgeois economists not only contrapose the capitalist public sector to the private sector, but also distort the economic role of the bourgeois state. They present it as a regulating force determining and developing the capitalist economy. Though the economic role of the bourgeois state under conditions of modern capitalism undoubtedly expanded, yet actually the state does not play and cannot play a decisive role in the economy. In 1900 in the United States state concerns and agencies employed 4% of the total labor force and 7% of the total capital; in 1950 they employed 12% of all workers and 20% of all capital.(15) The share of the state in United States economy, as may be seen, has noticeably increased; yet the decisive positions have been preserved by the private capitalist concerns employing 88% of the labor force of the country and using 80% of the capital. Consequently, even considering the ratio between the private and public concerns, it is absurd to speak of a "transformation" of private capitalist economy into a "mixed" one, not mentioning the fact that qualitatively the bourgeois state's concerns are not, in principle, different from the private capitalist's concerns.

In one of his latest works, Stewart Chase characterizes a "mixed economy" in this way: "Every modern economy, whatever the talk, is a mixed dish — with government ownership stewed up with private ownership, garnished with labor unions, cooperatives, societies, resale price maintenance laws, and huge non-profit organizations like colleges, churches, and foundations."(16) But if we have to use Chase's culinary jargon we may say that the bourgeois cooks prepare this dish of "mixed economy" according to the well-known recipe: one grouse and one horse.

It is characteristic that the partisans of the theory of a "mixed economy," defining the spheres of activity of private and public sectors, allow a decisive role in a "mixed economy" to private capitalist concerns and monopolies. Thus, according to Hansen "the division of labor" between private and public economies must be as follows: private concerns must produce and the state, to a considerable degree, must finance their production and buy their goods. Consequently there is no question here about a transfer of the most important means of production into the hands of the state. The division of functions about which Alvin Hansen and other bourgeois economists speak is quite clearly in the interests of the capitalist monopolies: they produce goods and get profits while the state gives contracts for a substantial part of these goods and pays for them with the taxpayers' money. As we see, the theory of a "mixed economy" serves as a justification for the utilization of the bourgeois state by the monopolies for their own enrichment.

The bourgeois economists see in a "mixed economy" an antidote to crises of overproduction and unemployment. Ascribing to the bourgeois state the role of a force capable of bringing a planning principle into the capitalist economy, they affirm that through state intervention the economic crises may be prevented and full employment ensured. Such a point of view also finds reflection in the official documents of the bourgeois governments. For example, in his Economic Report to the Congress Dwight D. Eisenhower, President of the United States, stated in 1954: "Government must use its vast power to help maintain employment and purchasing power as well as to maintain reasonably stable prices."(17)

However, the assertions of the bourgeois theoreticians and politicians about the possibility of transforming capitalism through state intervention and a "mixed economy" into a "planned" or "regulated" capitalism, which knows no crises and unemployment, is faulty theoretically and cannot stand the test of facts.

Such assertions are theoretically faulty because they spread illusions about the removal of the anarchy of production, crises and unemployment, peculiar to capitalism, while the economic basis of the capitalist regime — private property in the means of production — is preserved. Yet while capitalist property and the pursuit of profits produced by it are preserved, crises and unemployment cannot be eliminated. As to a "mixed economy," it was shown above that it destroys neither the domination of private property in means of production in the national economy, nor capitalist exploitation and the pursuit of profits.

It is interesting that even some bourgeois partisans of the theory of "regulated capitalism" and "mixed economy" express doubts as to the ability of the bourgeois state to prevent crises. Thus, John K. Galbraith, who is against "automatism" and for state intervention, writes: "There is also a grave question, as yet unanswered, of whether the techniques of economic management now subject to discussion are sufficient to secure the stability and growth of capitalism in face of all possible crises."(18) Of course, — and Galbraith tries by all means to play it down — the problem is not of technique, but of principle itself — no "technique" of state intervention can save capitalism from crises and unemployment.

Facts are a good proof of this. State monopoly capital was unable to prevent the crisis dips in production in the United States in 1949 and 1954. It was unable to prevent the new economic crisis which began in the autumn of 1957 and has resulted in a considerable drop in production and huge growth of unemployment.

The theory of a "mixed economy" distorts not only the economic role, but also the social functions of the bourgeois state, presenting it as a "welfare state." The theory of the "welfare state" is a modern variant of the old bourgeois theory of the state being above classes. According to this theory (which was accepted even by the progenitor of a "mixed economy," Adolf Wagner, and others) the state power in capitalist countries stands above classes and expresses the interests of all layers of society. Such an assertion is completely hypocritical.

First, in the field of social and political relations the activity of the contemporary bourgeois state is directed not in the interests of the "general good," but in the interests of the financial oligarchy. This finds expression in an offensive of the monopolistic bourgeoisie, helped by the state, against the democratic freedoms of the toilers (anticommunist trials and persecution of progressive-minded persons in the United States, prohibition of the Communist Party in the Federal Republic of Germany, etc.) as well as the use of state power in the struggle with labor unions (let us remember the notorious Taft-Hartley law).

Second, in the field of foreign policy the activity of the imperialist state is directed at the suppression of the national liberation movement of the peoples in colonial countries, at kindling the flames of the "cold war" and armament race, at forging aggressive military blocs in preparation for a third world war. Imperialist states, carrying on the armaments race with all its inevitably attending phenomena — increase of taxation and indebtedne inflation etc. — do not care about increasing the welfare of the masses, but for enriching the manufacturers of guns, tanks, atom and hydrogen bombs and other lethal weapons.

Third, in the economic field the policy of the bourgeois state is to defend the interests of the bourgeois monopolie Indeed, in whose interests is the superprotection of the cartels which drives prices higher and higher and prevent the development of international trade, if not in the interes of a handful of monopolies, selling their goods at inflated prices? Whose welfare is helped by state subsidies to cap talist monopolies during times of crisis; by the payment of high prices for huge military orders; by abolition of the excess profits tax after World War II, and other tax favors to the capitalists?

Interference of the capitalist state in economic life certainly does not serve the interests of "general welfare," as the bourgeois economists falsely proclaim, but the interests of monopoly capital. On the one hand the state in a direct or disguised form generously finances capitalis monopolies through highly profitable military contracts, sale of state concerns to private corporations for a song, granting of foreign loans from the state budget to force the export of goods, etc. On the other hand it imposes upon the masses a heavy burden of taxation to cover the ever-rising state expenditures — first of all, military expenditures. Thus, the bourgeois state is in no case a "welfare state" for all members of the society, independe of their class affiliations, but a weapon for intensifying exploitation of the toiling masses and for enrichment of the monopolists.

Those who preach the idea of the "welfare state," in order to put a solid foundation under their theories, cite such measures as state unemployment insurance and old age assistance, as well as financing by the bourgeois state within certain limits of expenditures on education, health and public works. However, unemployment insurance was obtained as a result of a stubborn struggle of the working class; in the capitalist countries education is available to the masses only to a limited extent; medical assistance in the foremost capitalist country — the United States — up to now is not free and all expenses for social services make up only 4% of the budget while the direct military expenditures exceed 60% of it. A remarkable "welfare state"

Thus, the bourgeois theory of the "mixed economy" was eated in order to cover the anti-popular activity of the nperialist state, to divert the masses from struggling ainst the capitalist regime.

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As early as in the eighties of the 19th century there apeared a reformist variant of the "mixed economy," adnced by the Fabians. The Fabian society, established 1884, opposed to Marx's theory of the proletarian revotion and dictatorship of the proletariat a reformist theory the gradual transformation of capitalism into socialism. he Fabians considered the expansion of public participaon in the economic life of the country as the main factor such a transformation. In a collective work "Fabian ssays in Socialism" published in 1889, the Fabians porayed developed capitalism as a "mixed economy" (though ey did not use this term) consisting of a private capitalt sector and a "socialized" sector. According to the Fabians he sphere of private exploitation has decreased" and ere are already present "rudiments of social reorganizaon" mainly in the form of "municipal socialism."(19)

A further development of the reformist variant of the nixed economy" theory took place during the period of e general crisis of capitalism. In a book by a prominent bor politician Hugh Dalton (who later became the Chancelr of the Exhequer) "Practical Socialism for Britain," ublished in 1935, we find the following statement: "Genrally we can measure the degree to which a given society socialist by the relative areas of the 'socialized sector' nd 'private sector' in its economic life. In the boundaries the socialized sector public property and control are resent in some form and the profit of capitalists is absent. o civilized society exists without a socialized sector in is sense, and this sector is a nucleus of the planned ublic economy."(20) According to Hugh Dalton a further ansition from capitalism to socialism must consist of e gradual expansion of the "socialized sector" and the eduction of the area of the "private sector."

In the most developed form the contemporary reformist riant of the "mixed economy" theory was presented in a ollection of "New Fabian Essays" published in 1953. The ery title of this collection emphasizes the continuity of e ideas presented now with the Fabians' ideas of the eighties."

In the very first article, written by R. Crossland, "Phisophy of Socialism" the following proposition is adnced: contemporary British economy is not capitalism, ut a "mixed economy" which lies between capitalism and ocialism. According to Crossland a "change of social imate" took place in England after World War II. The ate took upon itself responsibility for unemployment inurance, health insurance, and old age insurance, and beun to plan national resources for the purpose of ensuring ll employment and a just distribution of the national inme.

This theory was presented in greater detail in an article the same author "The Transition from Capitalism" ublished in the same collection and then included in his ook "The Future of Socialism" (1956). First of all Crossnd asserts that after World War II capitalism is being ansformed into a quite different system (21) the charteristic features of which in the economic field are, acording to him, the transfer of economic power from the pitalists to the managers, a new economic role of the ate and its transformation into a "welfare state," full nployment and uninterrupted growth of production. Among l these "new" feature he emphasized the role of the state. xpressing full agreement with the bourgeois economists, Crossland writes: "The power of the state has enormously increased, and it is now an independent intermediate power, dominating the economic life of the country." Attributing to the state an ability to control the whole economy and to determine the size and the distribution of the resources in the national economy, Crossland declares that "another essential feature of capitalism has thus disappeared — the absolute autonomy of economic life. This one change alone would justify the statement that the capitalist era has now passed into history."(22)

According to Crossland the transformation of British capitalism into a "post-capitalist society" began before World War II and ended after the War under the Labor Government. He asserts that already "by 1951 Britain had, in all the essentials, ceased to be a capitalist country."(23)

What regime then has Great Britain today? According to Crossland it is nothing else but a "mixed economy," containing capitalist and socialist elements. It happens that today's British society is at the same time capitalist and non-capitalist; its capitalist elements are represented by the domination of private property and the preservation of the class divisions; its non-capitalist elements are planning and the decisive role of the state in economic life. Crossland states directly that the British economy has socialist elements. He sees them in a more equal distribution of the national income and "socialization" of a substantial part of the economic power now in the hands of the state. "Yet," he writes, "This is not socialism. True, this is also not pure capitalism; it (society) carries out a certain portion of the traditionally socialist aims. To this degree it has socialist features."(24) According to him such a "mixed economy" has great practical advantages and agrees with the tastes of the British people.(25)

A similar concept is presented by another labor leader, former minister of the laborite government, John Strachey, in his book "Contemporary Capitalism" published in 1956. Just as Crossland, Strachey extols the economic role of the bourgeois state. According to him, one of the most important phenomena of our time is the fact that the state, from an arbiter, became a participant in production, as a result of which the very nature of the economy has become transformed.(26) Strachey ascribes to the state control over the distribution of the production resources of the country and of the national income. According to him the state is able to determine the volume of the aggregate effective demand and, maintaining it at a proper level, prevent sharp fluctuations of prices and the succession of industrial booms and crises. I am inclined to think, he says, "that our contemporary society, taken as a whole, will be a more stable, controlled, managed organism than the laissez faire capitalism of the 19th century." The influence of the capitalist state upon the economy he characterizes as a decisive retreat from capitalist principles.(27)

The German social democrat Fritz Sternberg also asserts that under conditions of contemporary capitalism "the state has a decisive influence upon the economy and society."(28) True, unlike British laborites, he recognizes that "the state sector is developed in capitalist countries under conditions where the basic elements of the capitalist mode of production are preserved." However he, following the laborites, considers contemporary England as a country where "the beginning of the socialist transformation has been made."(29)

To begin with it is necessary to emphasize that contemporary revisions in revisionist treatment of capitalism follow directly the bourgeois economists and borrow from them a great deal. Among such borrowings should be mentioned in particular: 1) the thesis concerning the decisive role of the state in economic life; 2) the assertion of the planned character of the contemporary capitalist economy; 3) the characterization of the contemporary state in the capitalist countries as a "welfare state."

The idea of a radical, material change in the role of the state in the contemporary capitalist economy and of a "regulated" or "planned" capitalism belongs to the bourgeois economists. Keynes ascribes to the state the role of a regulating force in the economy and the ability to cure capitalism of unemployment and crises. The revisionists do the same. It is characteristic that Strachey extolls Keynes who, according to Strachey, created an economic theory of the last stage of capitalism as a controlled and gradually modified capitalism.

We have shown above that the statement concerning the state's decisive role in the economy of capitalist countries is wrong. We may add that the state does not play such a role, not only in the United States, where industry, transport, and banks are almost all in the hands of private persons and corporations, but also in Great Britain where under the Laborite government a partial nationalization was carried out. Only an insignificant part of industry was nationalized and among all the banks — only the Bank of England. The part of the nationalized concerns amounts only to 20 or 25% of the aggregate capital. Moreover, later the steel industry was denationalized, while such important branches of British industry as machine building, the chemical and textile industries, etc. have not been nationalized at all. All commercial banks of the country, including the famous "Big Five," the stronghold of the financial capital of Great Britain, remain in the hands of capitalists and capitalist monopolies. It is quite evident that statements about the transition of "economic power" from big capital to the state is demagoguery.

Praises sung to the capitalists' "planned economy" are also social demagoguery. The first condition of a planned national economy is the transfer of the basic means of production into public hands, which is not present either in the United States, Great Britain or any other capitalist country. How can one speak of planned distribution of social labor and means of production when the volume of production and the rate of its growth are determined by self-directing economic laws acting under capitalism?

Following the bourgeois economists, the revisionists assert that in order to have a planned national economy it is not necessary to make public the most important means of production; that for this purpose it is quite enough to influence the economy by the state with the help of the financial policy through taxes, loans, and state appropriations. But this is radically wrong. The bourgeois state can, of course — with the help of its financial policy — influence the economy and especially carry out its militarization; but it cannot plan and direct the development of the economy.

Convincing refutation of the bourgeois and revisionist views is given by capitalist reality. During the post-war period in no other country did the state budget reach such a size and absorb such a large share of the national income as in the United States. If the logic of the bourgeois and reformist economists — who assert that the concentration of the financial resources in the hands of the state ensures a planned conduct of the national economy — is correct, then the development of the national economy in the United States proceeds in a planned way. Yet the United States in the first post-war decade went through two economic crises (in 1949 and in 1954) when industrial production was reduced by about 10%. In the autumn of 1957 a new crisis began in the United States, as a result of which in March 1958 the volume of industrial production, by comparison with the maximal level achieved in December 1956, was reduced 13%, unemployment sharply increased, the numbe of fully unemployed exceed six million.

There is no need to speak of a "planned" economy in Great Britain. Strachey's statement that there the state regulates prices in a planned way is refuted by the fact that prices were rising in Great Britain during and after the war as a result of which the purchasing power of the pound is now less than one-third of what it was. The problem of inflation does not leave the pages of the British press, while the laborites talk about a "planned" economy.

The situation is no better in respect to the third thesis advanced by contemporary economists — the "welfare state." The laborites magnify the real achievements of the British working class — the result of a stubborn class struggle. It is true, after the war social insurance was expanded and free medical service was introduced. But in no case is this sufficient to declare Great Britain a "welfa state." While twaddling about "welfare state" the laborites are silent about the most important thing — preservation capitalist exploitation. They are silent also about an enormous growth of taxation falling on the shoulders of the British workers. In 1951, that is, the last year, according to Crossland, of the capitalist era in Great Britain and the year of full realization of the "welfare state," the income tax on wages brough 265 million as compared with 2 milli in 1938, or an increase of 132 times. Receipts from incom tax on salaries of the white collar workers were 295 milli as compared with 43 million in 1938, an almost seven-fold increase, while receipts from income tax on other kinds of incomes during the same period increased only 3.5 time At the same time the sum of indirect taxes, paid mainly by workers, increased during the same period almost five times. What a "welfare state" it is, which skins the worke alive!

The taxation policy of the bourgeois state in which the revisionists see a weapon for "equalization of incomes" actually is a weapon for additional exploitation both of the working class and of the non-proletarian working masses. In whose interests is this policy? The answer may be see in the fact that enormous means taken from the national income through taxation are then pumped into the pockets of monopolists through payments for government military contracts and through other means. This may be seen from the way the sums taken in the form of taxes are distributed among the various classes of society. In that respect the following table calculated by the American Labor Research Association is of great interest:

Distribution of the tax burden in the United States
(in billion dollars)

Budget year	Taxes on working masses	Taxes on capitalists
1945/46	18.1	22.6
1952/53	36.3	34.0
1954/55	37.1	29.7
1956/57	41.4	33.2

We see that during the postwar period taxes of the work ing masses in the United States increased 129%, while taxes of capitalists increased only 47%. And one should remember that means obtained through taxes are returned to the capitalists through the mechanism of military contracts, subsidies, etc.

It is interesting also to note some admissions of the revisionists which contradict their twaddling about a "welfare state." For example, Crossland in one of his orks admits that "the working class pays in the form of xes more than it receives in the form of social benefits."(31)

The revisionist variant of the theory of "mixed economy," eside common features with a similar theory of the boureois economists, also has some differences. First, the ourgeois economists, characterizing the contemporary apitalist economy as a "mixed economy" see its "mixed" haracter in a simple combination of the state and private sectors;" the revisionists go further; they assert that in uch an economy socialist and capitalist elements are comined. Second, the bourgeois economists usually consider e "mixed economy," so to say, the final station of ecoomic progress, while the revisionists consider it only as n intermediary station on a peaceful road to socialism. n other words, the revisionist variant of the theory of the mixed economy" is closely connected with the reformist eory of a "peaceful growing of capitalism into socialism."

In the opinion of John Strachey there is no need for the orking class to go through the fiery test of social revoluon in order to achieve a completely new socio-economic ystem: it is enough to "utilize and bridle" capitalism, king as a guide to socialism...Keynesianism! Strachey eclares that "Keynes made the greatest contribution to e technique of democratic transition" to socialism, that e "helped to show to the peoples of the West the road rward which does not lead through total class warfare."(32) he absurdity of this statement is self-evident.

The revisionist treatment of the contemporary capitalist conomy as a "mixture" of capitalism and socialism has othing in common with reality. It is based on an evident isrepresentation: etatism is identified with "socializaon." The so-called state sector in the national economy f capitalist countries is an expression of state monopolistic apitalism and not of socialism. Only objective and subective prerequisites for the transition to socialism grow the womb of capitalism; but no socialist regime or sector merges there.

The revisionists, distorting Marx's teachings, for quite time have spoken about the possibility of an evolutionary, radual transition from capitalism to socialism, about the eedlessness of socialist revolution and of the dictatorship the proletariat during the period of the general crisis of apitalism. When the scientific vision of the founders of arxism became a living reality, it became very urgent r the outright ideologists of the bourgeoisie and its ckeys in the ranks of the working class movement to nd "proof" that a revolutionary transition from capitalism socialism is not on the order of the day. The social nction of the theory of "mixed economy" is to struggle gainst ideas of a revolution and dictatorship of the proleriat. Behind the theory of "transformation" of capitalism d its peaceful growing over into socialism through a mixed economy" there is hidden an apology for contemorary capitalism of the purest water which is more harml and dangerous than otherwise because it parades under e guise of pseudo-socialist phraseology.

Generally speaking, can an economy exist in which eleents of capitalism and socialism are temporarily comned? Of course it can. This is the economy of the transional period from capitalism to socialism. Lenin wrote connection with this: "But what does the word 'transion' mean? Does it not mean (as applied to the economy) at in this regime there are elements, pieces of both, pitalism and socialism? Everyone would say 'yes'."(33) ut such a "mixed economy" emerges only after the soalist revolution, while the revisionists, on the contrary, e a "mixed economy" as a means to ward off a socialist volution.

Thus the whole historical experience of the development of capitalism shows that so long as the capitalist mode of production does exist, the economy of the society is precisely capitalist and not a "mixed economy" however great is the participation of the bourgeois state in the economic life of the country. When the capitalist regime is liquidated, as a result of the socialist revolution, then there emerges an economy of several modes of production during the transitional period from capitalism to socialism.

FOOTNOTES

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A. Kulikov:

Some Questions of the Law of Value and Price Formation in the USSR

A correct application of value levers in the production, distribution and circulation of the social product, in the development and strengthening of cost accounting, in the improvement of planning of prices — these are necessary and important conditions for the successful growth of the socialist economy. During the recent period a number of articles and other materials were published in "Problems of Economics" devoted to problems of the utilization of the law of value and price formation in the socialist economy. In this article an attempt is made to present an analysis of the different points of view on questions of price formation expressed in the pages of this journal.

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In the course of the discussion the question of the role and character of the operation of the law of value was considered. It is evident from the published materials that the majority of economists accorded an important role (although a limited one as compared to the situation under capitalism) to the law of value in the development of the socialist economy. However, other points of view were also expressed on this question which were directly in opposition to the views of the majority.

Some economists (comrades Veduta, Khessin and others) wrongly consider that the law of value operates only where private property in the means of production rules, where there is market competition and free play of prices. In their view production costs, price, and the profits of socialist enterprises are not expressions of value, the law of value has no bearing on the establishment of prices, the unprofitable operation of enterprises does not weaken cost accounting, and so on.

Denying the operation of the law of value under socialism, some economists think that it is already possible to introduce direct accounting (in labor time) of expenditures of social labor and to establish, on this basis, the prices of products of socialist production. But the question arises: what labor do they have in mind? A natural measure (labor time) can measure only concrete labor while abstract labor, the substance of value, can be expressed only in price, in an exchange relationship between a commodity and money.

A somewhat different point of view on this question is held by Sh. Turetskii. In his opinion, the reduction of expenditures of living and embodied labor to simple labor (in hours) is a necessary condition for its monetary expression. Here, Comrade Turetskii proposes that the point of departure be minimum wages multiplied by a coefficient which expresses the share of the surplus product made available at the disposal of society. But he does not clarify what this minimum signifies and how to establish it. Meanwhile, this minimum depends on the level of prices of objects of consumption. Consequently, this proposal, in essence, calls for determining the values of all commodities with the aid of prices. The question unavoidably arises: how to connect this position with the recognition of the operation of the law of value and the utilization of money as a measure of value?

Attempts to directly take account of and plan abstract labor, that is, the magnitude of value of commodities, in units of labor time cannot be successful even though labor time is the measure of value inherent in commodities. Abstract labor, as the substance of value, does not appear directly. It is known that value is a relationship of produc tion presupposing a specific social mode of expressing in real form the expenditures of social labor embodied in a commodity. In other words, commodity production calls forth the necessity for the utilization of a monetary form of value adequate for it. Socialist society, distributing in planned manner the means of production and labor power among the branches of production and regions of the count establishing norms of output, norms of expenditure for means of production, the level of production costs, and so on, strives for a reduction in the magnitude of socially necessary labor time. But socially necessary time does n cease to be an objectively formed magnitude, and value an the law of value under socialism by no means loses its objective character.

Despite the fact, as Marx noted, that actual changes in the magnitude of value are expressed with insufficient clarity and completeness in the magnitude of the relative value of the commodity, the monetary form of value under conditions of commodity production cannot be eliminated. Consequently, the task consists of perfecting this form, of utilizing in the most effective manner for the socialist economy the complex mechanism of planned price formati

Social ownership of the means of production produces a fundamental change in the appearance and role of the law value under socialism as compared to capitalism. When private property rules, when market exchange is the only form of social connection between commodity producers, the law of value spontaneously regulates the proportions of development of the economy. In a socialist economy th law of value ceases to be a regulator of the distribution o the means of production and labor power among the branc of the economy. The decisive role in the development of t socialist economy, in the distribution of means of production and labor power among branches is played by the bas economic law of socialism and the law of the planned deve opment of the national economy. That is why it is imposs to agree with those economists who propose to grant the l of value "full scope" and to transform it into a basic regulator of socialist production. This thesis, in essence is directed toward transferring, in one degree or another the operation and appearance of the laws of a capitalist economy into socialist practice which would inevitably undermine centralized planning and open the path to spontaneous forms of economic activity.

But does this mean that the law of value under socialis has no bearing on the planned determination of the propor tions of the socialist economy and the distribution of mea of production and labor power among the branches of production? Because goods are produced as commodities ınder socialism and social labor appears in commodity form t is impossible to either establish the necessary propor- ions in the development of the socialist economy or to ealize them without utilizing the mechanism of the law of value. Value lies at the basis of prices. We know, for example, the role that is played by taking account of the operation of the law of value, by a comparative analysis of he production costs of individual types of fuel for a correct letermination of the proportions in the growth of branches of the fuel industry and for ensuring, on this basis, a reduc- ion in the expenditure of social labor per unit of conven- ional fuel. A correct establishment of prices of agricultural products by taking account of values is a necessary condi- ion for a sharp expansion of agricultural production. The planned establishment of prices of agricultural products serves as one of the factors ensuring proper relationships n the rates of growth of this or that branch of agriculture. However, the law of value cannot have a self-sufficient, lecisive significance in the planned determination of the volume, rates, and proportions of growth of production un- der socialism. This role is subordinate here, it is limited by the operation of specific economic laws of socialism.

ON THE RELATIONSHIPS BETWEEN PRICES OF MEANS OF PRODUCTION AND ARTICLES OF CONSUMPTION

In the discussion that unfolded, a great deal of attention was devoted to questions of the level and relationships between prices of means of production and articles of con- sumption and to the price system in the national economy of the USSR. These questions, undoubtedly, occupy a central role in the problem of price formation under socialism.

In the USSR there developed historically a different level of prices for means of production and articles of consump- ion. At all stages of development of the socialist economy prices of means of production were relatively lower than prices of articles of consumption although the relationship of the price levels was subject to considerable changes in certain periods.

The authors of the materials published in the journal have different explanations of the reasons for the formation of the two price levels. Thus, comrade Kronrod and several other economists presume that fixing prices of the means of production below their values during the transition period was called for by the need to redistribute the national ncome in favor of socialism at the expense of private capitalist elements. This position cannot be accepted as convincing. Capitalist elements were to a considerable extent purchasers and not suppliers of the means of produc- ion. For the purpose of restricting capitalist elements the Soviet state carried out a flexible policy of differentiated prices, transportation rates, rental rates, and so on.

Comrade Turetskii, on the other hand, thinks that during he NEP period the possibility of fixing relatively low prices on the means of production was limited and only with the triumph of socialism is the policy of low prices for means of production being fully carried out and it should also be continued into the future. From this point of view one may conclude that the gap between the price levels of means of production and articles of consumption is now greater than it was during the restoration period. But this does not correspond to reality. The ratio of prices (on the average) to production costs in branches of industry of group "B" was greater than in branches of industry of group "A" by 44% in 1925/25, 55% in 1926/27, and 45% in 1955 2nd half of the year).(1)

It may be seen that the relationship which exists now between the prices of industrial products of group "A" and of group "B" differ little from the price relationships in the restoration period. Here, undoubtedly, the measures taken in the post-war period in the sphere of price formation have had an effect: the increase in wholesale prices in industry in 1949, in procurement and state purchase prices for agricultural products (and consequently, an increase in production costs in branches of Department II using agricultural raw materials), the reduction in retail prices.

In connection with the extremely low level of wholesale prices which did not cover production costs for the means of production, as we know a system of state subsidies in industry was established. There were objective reasons for this. However, some economists idealizing the system of subsidies, close their eyes to those negative consequences which are connected with this system.

The appearance of budget subsidies was produced to a considerable extent by a more rapid growth of the nominal wage level than of labor productivity. Such a relationship in the dynamics of wages and labor productivity was called forth then by a number of circumstances. Thus, in the first five year plan it was connected to a certain extent with the strained rates of industrialization of the country and the necessity for a redistribution of labor resources, with the creation of new industrial centers in the East, with the liquidation of equalitarianism in the payment of labor. An important influence was also exercised by the liquidation of the rationing system of supply in 1935 and the transition to trade at uniform prices, that is, an increase in retail prices which called forth an increase in wages.

The negative effect of the system of subsidies, obstructing the strengthening of cost accounting in industry, was already felt during the years of the first five year plan. But it was then supposed that during the second five year plan, as a result of reductions in production costs, this system would be liquidated without increases in wholesale prices of means of production. This supposition was not justified. In 1935 the amount of subsidies increased. In 1936 the process of increasing prices of means of production so as to eliminate the system of subsidies was begun although it was prolonged and not concluded until the start of the Great Patriotic War. It would be a mistake to lose sight of the negative consequences of the system of prices which gave rise to mass-government subsidies and to view an increase in the gap between the price levels of means of production and articles of consumption as an improvement of the price system. In 1949, because of its negative influence on the development of industry, the system of subsidies was liquidated by means of a comprehensive reform of prices, wholesale prices were established considerably closer to values and this was a highly important positive factor in the post-war practice of price formation.

It is necessary to further improve the wholesale prices of various types of articles, to eliminate their excessive, economically unjustified departure from values which gives rise to the unprofitable operation of enterprises even when these work well, to liquidate the excessive diversity of prices and profits.

Let us now examine the position taken by some economists that the redistributive function of prices has now lost its significance, that prices of means of production must necessarily include their full values, that it is necessary to completely liquidate price differences between means of production and articles of consumption by means of a comprehensive increase in prices of means of production to the level of retail prices.

Many participants in the discussion have subjected this position to criticism. They have pointed out here that the proposed increase in the prices of means of production cannot be viewed as a technical measure because it would effect the prices of agricultural products and, in part, the retail prices of articles of consumption.

The proposal to increase the prices of means of production to the level of retail prices of articles of consumption means, in essence, to raise the prices of means of production to their values.(2) In comrade Kronrod's opinion this may be accomplished if identical amounts of net income in relation to paid labor would be provided in the prices of means of production and articles of consumption. If the prices of means of production would be established so as to fully reflect the amount of social labor embodied in them, the monetary significance of economies of previous labor would be increased, the number of unprofitable enterprises would be reduced, and so on. It cannot be denied that the features enumerated here have a positive significance. However, the proposal to increase the prices of means of production to the level of retail prices is unacceptable. Even if we disregard the effect which an increase in the price level of means of production will have on procurement and retail prices, such an increase must give rise to a number of undesirable consequences for the whole national economy. Such a step would signify a rejection of the practice of setting relatively low wholesale prices for means of production which is playing an important role in the development of the socialist economy at the present stage. This role is corroborated by the experience of economic construction in the USSR and other socialist countries. As the decisions of the February (1927) Plenum of the Central Committee pointed out, a policy of high prices under socialism, with competition absent, "can create the danger of bureaucratization of our production and trade apparatus, weakening an interest in continuous improvement in production and trade." Under present conditions an increase in the prices of means of production to the level of retail prices may deprive the state of an extremely important means of economic influence on socialist production. Further, in our view we cannot lose sight of the following important consideration.

A sweeping increase in the prices of means of production to the level of retail prices would lead to a situation in which the actual relationship between expenditures of previous and living labor would be distorted in production costs insofar as the amount of paid labor as an element of production costs does not reflect total expenditures of living labor (newly created value). Under such conditions it would be disadvantageous for enterprises to introduce new technology ensuring an increase in labor productivity and a reduction in costs of production if the enterprises' savings on the payment of labor achieved with the introduction of new technology would not cover the increased costs of previous labor connected with its application. In this way there would be created serious barriers to the introduction of new technology in production and the realization of the law of steady increase in labor productivity would be limited.

Under capitalism, as we know, "the law of increasing productive power of labor does not have an unconditional significance;" here, new technology is applied only "if savings on the paid-for part of living labor are greater than the additional costs of previous labor..."(3) Under socialism the limits to the application of new technology are determined by economies on the whole of social labor and improvements in the conditions of labor. Here, there is created a wide scope for technical progress, for realizing in every possible way the requirements of the law of steady increase in the productivity of social labor. The maintenance, at the current stage, of relatively low prices for th means of production promotes a more consistent realization of this law.

The question of the level of prices of the means of production has acquired a particularly urgent meaning in connection with the transition to the free sale of agricultural machinery to collective farms. Should machines an other means of production be sold to collective farms at retail prices which fully correspond to their values or at wholesale prices which include part of net income — this was the problem posed by practice. Let us suppose that t means of production would be sold to collective farms not at wholesale but at retail prices. This would strongly affe production costs at collective farms. It would be necessa to correspondingly increase the state purchase prices for collective farm output in order to ensure mutually advantageous exchange equivalents for the state and for collect farms. This, in turn, through a chain reaction would prod an increase in other prices as well as a change in the structure of prices of articles of consumption and, it is p sible, it would be necessary to reduce the share of the turnover tax since an increase in state purchase prices f agricultural products would correspondingly affect produc tion costs in industry which processes agricultural raw materials. We leave aside the question of all the consequences of these changes. We will pause for only one feat The sale to collective farms of agricultural machinery at prices corresponding to the level of retail prices would l to the following: under these conditions, in the costs of production of collective farms (production costs) the relationship of expenditures for the use of agricultural machinery and expenditures for the payment of collective farm labor would not reflect the actual relationship of expenditures of embodied and living labor. The real econo effect of the utilization of new machinery would be reduce and in many cases it would be disadvantageous for collective farms to purchase and operate it since the savings o collective farms on the payment of labor would not cover the increase in current material costs connected with the application of machinery. Such cases would arise time an again only because the increase in expenditures of previo labor resulting from the increased utilization of machine would be fully reflected in production costs of collective farms while the savings on living labor achieved would b partly reflected — only insofar as the payment of labor i concerned. In the meantime, the utilization of machinery would ensure an increase in the productivity of social lab and a corresponding reduction in the cost of collective fa output.

The sale to collective farms of agricultural machinery and other means of production (fuel, lubricants, mineral fertilizers, insecticides, and so on) at retail prices woul have particularly harmful consequences now when labor payments are still relatively low in a certain number of collective farms. Besides this, establishing the price of agricultural machinery at the level of its full value would in itself make it extremely difficult for economically wea collective farms to acquire it, which would delay the expa sion of backward collective farms.

Therefore, the use of retail prices for tractors, agricultural machinery, and other means of production in sales to collective farms would hinder the introduction of agricultural technique into collective farms and the expansion of collective farm production. Grea damage would be imposed on the development of collective farm property, the growth of indivisible funds of collective farms, the accumulation and renewal of instruments of labor in collective. All of this would ave an effect on the distribution of collective farm icomes, on the structure of demand for industrial roducts in the countryside. Thus, prices of agricul- ıral machinery are connected with the fundamental roblems of development of the whole socialist economy. Our economic policy," said comrade N.S. Khrushchev in .s report to the June (1958) Plenum of the CC CPSU, must be guided so that collective farms will tirelessly ruggle for technical progress, replace old machinery with ew, improved machinery, because it is only in this way at we can solve the main task — an increase in labor pro- ıctivity and a reduction in the cost of production of a unit f output in agriculture."

The question arises: does not the realization of means of roduction at prices which are below values cause a loss to ıe state? No, it does not. The state is not only the supplier f means of production to collective farms but also a pur- ıaser of collective farm output, in which case the purchase f this output is made at fixed state prices. Under the onditions of a planned organized exchange between state dustry and collective farm agriculture the state has the ossibility of recouping its losses from realizing industrial roduction at relatively low wholesale prices by means of ıe purchase of collective farm output at prices which are orrespondingly lower by the amount of this difference.

What has been said here about agricultural machinery lso applies in one degree or another to the prices of means f production used in the state economy.

Thus, the experience of the USSR shows that the mainte- ance of relatively low prices for the means of production s of very great national economic significance not only uring the years of the transition period from capitalism socialism but also under current conditions.(4) In par- cular, this is connected with the mass replacement of hand bor by machinery. Relatively low prices for the means of roduction, as we have already noted, promotes the intro- uction of machinery in all branches of socialist production.

However, it should be emphasized that the deviation of rices for the means of production from their values should ot be excessive and is permissible only within certain mits. If prices are set below branch production costs or ven at the level of production costs this has negative onsequences. First, cost accounting in industry and the ignificance of economies of the means of production are eakened, and hence the law of value is violated; second, n incorrect relationship is formed in production costs etween the expenditures of living and previous labor (the hare of expenditures of previous labor in this case would e understated) which may promote the creation and use n production of machinery which is of low productivity. his would be at variance with the law of steady increase f labor productivity which prevails under socialism. The evel of prices of means of production must ensure a ormal profitability of production in efficiently functioning nterprises. But, of course, from this the conclusion does ot follow that there should be an indiscriminate extensive icrease in prices of means of production to the level of etail prices.

This proposal is also unacceptable because the level of rices of the means of production would then become irectly dependent on the prices of consumer goods. In this ituation, wholesale prices of means of production would ave to be lowered not on the basis of a reduction in pro- uction costs and by considering the concrete tasks of de- eloping production, but in connection with a lowering of etail prices of articles of consumption. As we know, the asis for reducing retail prices is a reduction in the values nd production costs of consumer goods. But here the necessary condition for a reduction of retail prices in the immediate future is a more rapid increase in the production of some articles of consumption (commodity supply) than of purchasing power demand. Hence, if we should try to establish prices of means of production at the level of retail prices, a change in the price level for the whole socialist economy would depend to a considerable extent on the relationship between the demand and supply of consumer goods. The unacceptability of such a "basis" for fixing the prices of means of production is obvious.

Insofar as a further bringing together of the prices of means of production and articles of consumption is concerned, it is necessary and possible, not however by increasing the prices of means of production to the level of retail prices but chiefly by a reduction in production costs and a further reduction in retail prices of consumer goods. In other words, bringing together these price levels is possible with the existence of certain material pre-conditions connected with the development of social production and its structure, with the rate of accumulation and the size of that part of the surplus product which is used for the maintenance of the unproductive sphere, for the defense of the country, and so on. The pre-conditions for the further bringing together of the price levels of means of production and articles of consumption are being gradually created in our economy thanks to the measures being taken by the party and the government for a sharp expansion of agriculture, a steady increase in the output of goods of the light and food industries on the basis of a preferential growth of heavy industry and an increase in labor productivity. As a result of technical progress in all branches of socialist production, a considerable increase in labor productivity, a further increase in the level of life of the people and the operation of a number of other factors the possibility of a significant reduction in the differences between the price levels of output of the two subdivisions of social production will be created. Even now in certain cases a partial increase in the prices of some types of means of production is not excluded if this is called for, for example, by the need to eliminate state subsidies and other defects connected with an extremely low level of prices.

ON THE SYSTEM AND UNIFORMITY OF PRICES FOR THE OUTPUT OF SOCIALIST ENTERPRISES

The different level of prices for means of production and articles of consumption was formed in the USSR under the influence of the objective conditions of growth of the socialist economy and therefore it cannot be viewed as the result of subjective intentions in the process of planning prices. Some economists think that prices have an economic foundation only if the price of every commodity coincides with its value or its "averaged value." In their view, prices of means of production cannot be viewed as having any foundation so long as they do not coincide with values. These writers start from the premise that in a socialist economy prices must be established only by taking account of the law of value, and other economic laws have no bearing on price formation. Such views are based on an abstract scheme and are not in accord with the practice and requirements inherent in the growth of socialist production.

Price, as the monetary form of value, is a specific mechanism of the law of value but this mechanism must be under the influence of other economic laws which play a decisive role in the development of socialist production. In this way the operation of the law of value is guided in a planned manner and utilized in the interests of socialism.

As we have already noted, relatively low prices for means of production represent an important economic factor making for technical progress under current conditions. Hence, they must be established by taking account of the operation of not only the law of value but also the law of steady growth in the productivity of social labor, and in the final analysis, the basic economic law of socialism. Therefore, the law of steady growth of labor productivity has great significance in establishing the foundation for prices of means of production.

Economists who deny the redistributive function of prices under socialism think that prices may deviate from the values of commodities only in exceptional cases. It cannot be denied that establishing prices of all commodities at the level of their values would make it easier to construct a balance of the total social product and the national income, to determine the branch and regional structure of production, funds of accumulation and consumption, and so on. However, price would then be transformed into a passive register of the magnitude of value and it would cease playing the role of an active lever in the hands of the state for affecting economic processes. Even if we abstract from the influence of demand and supply on the prices of consumer goods and the necessity for influencing demand in a planned manner through retail prices (which assumes a deviation of prices from the values of commodities) the proposed price system cannot be accepted chiefly because the technically backward branches of production where hand labor prevails would become the most profitable and, on the other hand, the technically advanced branches where the share of expenditures of living labor in costs of production are relatively small would be of relatively low profitability. But such a situation would contradict the principles of socialist economic management.(5) To cite the fact that the increased net income realized in the prices of output in branches where living labor prevails can be removed by means of a differentiated turnover tax in essence changes nothing because the establishment of a higher turnover tax in technically backward branches would be absurd.

It is wrong to deny the redistributive function of prices in a socialist economy and to suppose that this function was necessary only in the transition period from capitalism to socialism while under current conditions it has disappeared. The practice of socialist construction in the USSR has irrefutably demonstrated that it is impossible to establish a rational, economically based price system without, to some degree, a redistribution, through prices, of the net income created in different branches of material production.

There are objections to the very method of fixing prices to correspond to the values of all commodities, according to which prices must ensure an identical relationship of net income to paid-for labor in all branches. It should be noted, first of all, that paid-for labor (we refer to nominal wages) in each branch of production is taken without qualification as an exact reproduction of necessary labor. However, in individual branches there may be a marked difference between them.

Marx, in disclosing the complex mechanism of price formation showed that the market value of a commodity as the direct foundation of price may be determined by the best, average, and worst conditions of production in different branches. With full correspondence of the price of each commodity to its value the relationship between paid-for labor and realized net income may differ in individual branches and subdivisions of social production.

Marx did not at all consider that the deviation of prices from values was a violation of the law of value, particular the persistent kind of deviation which arises from the formation of prices of production. On the contrary, he showed that the law of value is modified here, that the direct basis of prices is not branch value but the price of production of the commodity which appears under the influence of the operation of the law of the average rate of profit.

To deny any kind of modification of value as the basis of prices in a socialist economy and to view branch value as the only acceptable basis of prices means to lower the role of prices and their redistributive function, to reduce price to an accounting category. In reality the economic laws of socialism, acting on the process of price formation, give rise to the necessity for utilizing a certain modification of value as the basis for prices of output of socialist enterprises.

Some economists (comrades Malyshev, Vaag, and others holding that a uniform level of prices for means of production and articles of consumption is required, think that the "price of production" must be the basis for these prices. In supporting his position comrade Malyshev, for example, presents some substantial arguments in our opinion. In particular, he writes that in any branch of production with a growth of fixed capital and technical equipping of labor t social productive power of labor is raised, as a result of which more surplus product is created in this branch. It cannot be denied that such a system of prices would promo the solution of the tasks of technical progress to a greater degree than setting prices to correspond to the branch valu of each type of product.

However, let us clarify the basic question: can we start from a single rate of net income in relation to the production funds used in each branch to fix prices for all types of output? It was shown above that a single rate of net income cannot be used in fixing prices of industrial and agricultur products and, within industry, of means of production and articles of consumption. Moreover, a single rate of net income is not applicable in fixing prices within a given sub division of social production and even for several individua branches of industry. A single rate of net income in the prices of means of production in industry is not applicable first of all because there are substantial differences in the expenditures on individual types of mutually replaceable products, the prices of which must be in a certain conform ity with one another. In connection with this, different rate of net income in relation to functioning production funds are formed. For example, it is necessary to take account the structure of the fuel balance in which the principal place is still occupied by the more expensive (per ton of conventional fuel) coal fuel and therefore considerably mo net income is realized in the prices of liquid fuel and gas. If we were to start from a single rate of net income incorporated in the prices of different types of output of the lumber industry the profitability of saw-mill enterprises would be unjustifiably high compared to that of logging ent prises. This is explained by the fact that in the production funds of the saw-mill industry circulating funds (used first of all for cutting lumber) occupy an important place while in logging camps, the most important branch of the lumber industry, they occupy an insignificant place.

The principle of a single rate of net income in relation t production funds is also unacceptable in fixing the procure ment prices of agricultural products. Thus, a single rate of profitability in the prices of grain and technical crops would have a negative effect on the growth of production of technical crops, particularly those having heavy labor requirements. The application of this principle to the prices of articles of consumption would signify a refusal to influence consumer demand through prices and would lead to a large gap between the demand and supply of individual com modities.

Thus, the principle of a single rate of net income in rela- n to production funds in all branches of production as the ly principle of price fixing in a socialist economy is far om supportable as soon as we try to make the transition om an abstract scheme to the determination of concrete ices. It must also be noted that the establishment of a ngle rate of net income in the price of all types of output the national economy would unavoidably bring in its wake sharp increase in the prices of means of production, the acceptability of which has already been noted above.

Some comrades recommend that prices of means of pro- ction and articles of consumption be established by adding single rate of net income to the average branch produc- n costs of each article. In the view of comrade Kondra- ev, the "averaged value" of each article would be deter- ined in this way. He proposes that this method be used, t for the purpose of a comprehensive revision of all ices, but for fixing prices of new articles so that existing ices will be gradually replaced by new ones ("Problems Economics," 1957, no. 5, p. 71). But new types of ticles represent first of all newly mastered technique. As know, the creation of new types of articles and master- g their production involves, as a rule, large expenditures, d even under the existing price determination procedure en profitability constitutes 3-5% of production costs the ice level for new articles is often so high that such prices eate serious obstacles to the introduction of new technique to production. Therefore, for the purpose of stimulating chnical progress and a more correct evaluation of output d fixed capital proposals were made that prices of new achinery be fixed not on the basis of original production sts but by taking into account the perspectives of reduc- g them as a result of mastering production and compen- ting the producer for the difference by means of a ecial fund for the mastery of new technique. If prices of w articles were to be set by the method proposed by D. ndrashev they would be in direct conflict with the aim of chnical progress.

All of these proposals on establishing a single rate of ofitability ignore the fact that under socialism the law of e average rate of profit does not exist and that a planned onomy requires a differentiated approach to price for- ation in various branches.

Many economists, having criticized the proposal to raise e prices of means of production, support the need for taining a different level of prices for means of production d articles of consumption. But in doing so some of them ld that under socialism there cannot be a single principle price formation for means of production and articles of nsumption. Such a point of view is held, in particular, by Minc. There are serious objections to comrade Minc' esis that the value of the means of production is equal to e sum of money incomes of the socialist economy which earmarked for their acquisition ("Problems of onomics," 1958, no. 1, p. 98). Even if we assume that the thor has in mind the sum of prices of means of production hich must correspond to the money incomes of enterprises cluding budget grants) which are earmarked for the rchase of means of production, it does not follow that the ices of means of production are determined by these in- mes.

The economic basis of prices of means of production is eir value. This formulation is correct even in the case which the prices of means of production are set below eir value. The law of value permits a deviation (includ- g a persistent one) of price from value, but of course thin certain limits. The requirement of the law of value nsists first of all in observing equivalence in exchange. This requirement is not violated if the principle of establishing relatively low prices is more or less uniformly applied to all types of means of production.

The role of the law of value is also revealed in the way in which it determines the permissible limits of the deviation of price from the value of a commodity, the violation of which has a negative effect on production. Thus, urgent needs of practice, conditioned by the operation of the law of value, dictated the necessity of increasing wholesale industrial prices in 1949 when they were below production costs and agricultural procurement prices in 1953. In both cases the price increase was a response to the requirement of the law of value which had been violated because of an excessive deviation of prices below value.

With the increase of wholesale prices in industry and procurement prices of agricultural products have been brought closer to values of means of production although even the higher prices do not reflect full value. It is impossible to agree with I. Konnik who holds that as a result of the reform of wholesale prices in 1949 there was no bringing together of prices and values ("Problems of Economics," 1958, no. 1, p. 104). The process of bringing prices of means of production closer to their values is occurring even now (regardless of the fact that prices are remaining unchanged for a certain period) for labor productivity is growing and production costs of the means of production are being reduced. This process will also continue in the future.

Some economists disparage the importance of the production costs indicator in planning prices by citing the dependence of production costs on the price level of means of production. This only testifies to the objectively existing inter-connection of prices of different types of means of production and cannot serve as the basis for negating the role of production costs which express part of value and play the role of a most important factor in price formation under socialism.

The question arises: by how much should prices of means of production exceed their production costs? By what should we be guided in establishing the amount of net income as an element of price and, consequently, in establishing the groundwork for the price level of means of production?

This question can be answered only on the basis of generalizing our practice and taking its requirements into consideration. In fixing prices concrete conditions of expanded reproduction must be considered, including the need for appropriate material stimulation of enterprise collectives.

The conditions of reproduction are reflected in the level of branch production costs, in the growth of functioning production funds (basic and circulating), in expenditures for the material stimulation of enterprise collectives (the enterprise fund or analogous funds), for the training of skilled cadres, and for conducting scientific research. All of these conditions differ substantially among the individual branches of production and influence the value of output. Profits, realized in the prices of the products of a given branch of industry must to a considerable degree ensure expanded reproduction in this branch.(6) This, of course, does not exclude, but pre-supposes the need to redistribute net income among branches particularly when new branches of industry are being created. It is a matter of the kind of modification of the value of means of production (production costs plus net income) which will serve as an objective criterion in determining prices.

This position has nothing in common with the position taken by the adherents of establishing prices according to the "prices of production" scheme because it is the expansion of production funds which is the main factor determining the rate of net income in the price of the output of one or another branch of production. However, in any case it is a matter of realizing, in the prices of means of production, not the whole of the surplus product but only part of it and the magnitude of this part in relation to production funds does not have to be identical in different branches, a differentiated approach to the various branches being required.

With this approach to the establishment of wholesale prices of means of production (as well as wholesale prices of enterprises producing articles of consumption) the level of net income of industrial enterprises will increase, the role of profits in ensuring expanded reproduction and the material stimulation of enterprise collectives will increase. However, some enterprises will be unprofitable because of different levels of production costs in different regions. One measure to eliminate the unprofitability of enterprises working under unfavorable conditions can be a more extensive utilization of regional and rated prices.

The level of net income is determined not only by the conditions of reproduction in different branches but also by the need to observe a conformity of prices for interchangeable output (for individual types of fuel and electrical energy, for example).

It should be noted that the principal defect in the current practice of price formation, signifying, in essence, the presence of facts which violate the requirements of the law of value, is the considerable, economically unjustified diversity in levels of profitability and the lack of coordination in the prices of different types of output within a given branch of production which is connected with it. This practice has a harmful influence: there appear, at the expense of social needs, "advantageous" and "disadvantageous" types of output and individual enterprises end up in unjustifiably different circumstances depending on the nomenclature of the articles they are producing. This also interferes with a rational specialization and cooperation of enterprises. Production costs cease to be a reliable indicator of the relative level of expenditures on the production of different types of output, including interchangeable types of output, and this hampers a correct organization of production and a rational utilization of resources, the selection of the most economical types of structures, raw materials, semi-finished materials, and so on.

The profitability of individual types of output may change in connection with varying changes in the technical level of production of different types of output. However, an analysis of existing prices shows that the main reasons for the diversity of rates of profitability are the deficiencies in the relationship of prices, occasionally unjustified differentiation of profit levels used in fixing prices, and errors in calculations of production costs of concrete types of output.

The branch rate of net income may be somewhat differentiated, for example, for the purpose of stimulating the output of scarce, high quality, complex types of articles. But the differentiation must not be excessive because this may lead to a situation in which the production of some articles may result in losses for enterprises while the production of others may yield excessively high profits.

The elimination of lack of coordination in prices is extremely important for a consistent strengthening of cost accounting because under these conditions the expenditures of social labor on the production of commodities would be more correctly reflected in price relationships as well as in production cost relationships of individual types of products insofar as production costs themselves depend on the price level of means of production. In other words, with the elimination of lack of coordination in prices there will be an improvement in the whole value mechanism of accounting of social labor and control over production.

In connection with the fact that prices of means of production include not the whole value of the surplus product created in the given branch but only part of it, this part must be realized primarily in the form of profits of industrial enterprises. But under certain conditions it is expedient to use two forms of realizing net income: profits of enterprises and direct payments into the budget. This i necessary in those cases where the increased net income in one or another branch is created as a result of measur taken to achieve unity of prices for interchangeable types of output with different levels of production expenditures (this, for example, is the basis for the turnover tax realized in the prices of fuel oil and electrical energy) or under the influence of natural factors in branches of the extractive industry. Here, differential income may be realized in the prices of the output of the extractive industry (for example, stumppage fees) as well as in the prices of the output of branches of manufacturing industry. Thus the high profitability of the Magnitogorsk Metallurgical Combine is caused not only by its being a large and technically advanced enterprise but to a considerable degree by the fact that it uses relatively cheap ore and fuel. This part of net income in the form of rental payments is subject to removal into the budget since it does not promote the further reduction of production costs.

The wholesale prices of industrial enterprises producing means of production, as a rule, are simultaneously the prices at which the means of production are marketed to their consumers. Hence, means of production circulate at prices in which the surplus product is realized not in full, but partly. The wholesale prices of industrial enterprises producing articles of consumption are fixed according to the same principle as the wholesale prices of means of production, that is, with the inclusion of part of the value of the surplus product. But in the sphere of circulation (trading enterprises) articles of consumption are release at prices which include the whole value of the surplus product in the form of profits and the turnover tax (the wholesale price of industry).(7) Here, in the wholesale price of industry there is realized not only the net income created in branches producing articles of consumption but also the net income which was not realized in the prices o means of production used in these branches.

The prices for output received by the state from state farms and collective farms are established according to the principle of wholesale prices of industrial enterprises after, of course, taking into consideration the peculiaritie of agriculture and collective farm production.(8) As the decree of the June (1958) Plenum of the CC CPSU noted, i determining the level of new procurement prices it is necessary to consider the need to reimburse collective farm expenditures on the basis of the average regional conditions of production, the growth of labor productivity, the reduction of production costs and the creation of nece sary accumulation for the expansion of socialist reproduc tion. In this way a certain unity is ensured in fixing wholesal prices of both means of production as well as of articles of consumption produced and realized by industrial and agri cultural enterprises. It consists of not expressing the wh value of output in wholesale prices and of not realizing th whole of produced net income in these prices but part of i with this part being determined by the concrete condition of reproduction in each branch. This is why it is impossi to agree with those economists who deny the unity and objective basis of prices of socialist enterprises.

ON THE SOCIAL AND INDIVIDUAL VALUE OF THE COMMODITY AND TERRITORIAL (ZONAL) DIFFERENTIATION OF PRICES

In the process of the discussion some economists doubted the suitability of a territorial differentiation of prices. Thus, D. Kondrashev considers regional price divisions as unjustified because prices must be based on social and not on individual value ("Problems of Economics," 1957, no. 5, p. 75). This view of regional prices is fully in accord with the thesis of "averaged value" as the basis of prices, the realization of which would signify the elimination of all regional prices.

First of all it should be noted that one cannot contrast social value and regional prices because one does not exclude the other. First, given a single social (national) value, regional prices may be necessary for a partial redistribution of net income among branches and sectors of production. Second, the value of individual commodities in such a large country as the USSR may differ in different regions of consumption (in concrete conditions of local markets).

It is known, for example, that the prices of coal and ore are fixed by basins and that the prices of metals are uniform. Under these conditions part of the net income created in the extractive industry is realized in the prices of metal (as we have already noted in the case of the Magnitogorsk Combine). Uniform prices for coal and ore would not promote a rational utilization of resources, in particular, the utilization in certain cases of local fuel as well as a correct location of metallurgical enterprises. Analogous to this is the role of zonal prices for agricultural output through which the state withdraws a considerable part of differential rent. Zonal prices also promote a rational location of agricultural production.

Let us turn now to another example: regional prices for lumber. The cost of lumber in individual regions of consumption differs: it includes expenditures both for the procurement and processing of lumber as well as for its delivery to the point of consumption. With the help of regional prices for lumber FOB user's station not only is the final cost of lumber in the regions of consumption considered but a certain influence is exercised on the utilization of different building materials. An analogous situation exists with regional retail prices for some consumer goods, the necessity for which is called for by different levels of expenditures for the production and circulation of the commodity in individual regions of the country as well as the need to exercise some influence on the formation of consumer demand and on prices in the collective farm market.

The prevailing practice of regional (zonal) prices still has serious defects and this was noted by some participants in the discussion. Among these is the fact that there is not always a justification for the differences in the level of regional or zonal prices for individual commodities as well as for the number and borders of the regions (zones). The system of regional (zonal) prices must be persistently improved. However, it should not be rejected as it is by comrade Kondrashev who mistakenly considers it to be incompatible with social value. As the experience of the work of the Economic Councils shows, the need to expand and improve the system of regional prices in industry has increased. An economically based regional differentiation of prices for industrial output will help solve the problem of ensuring the profitability of industry in a number of economic regions. The improvement of the system of zonal prices for agricultural products is also of great importance. The expansion of the rights of Republics in the sphere of price fixing of consumer goods testifies to the development of territorial differentiation of retail prices.

Insofar as the individual value of the commodity is concerned, it should not be underestimated as a feature of social value and as a substantial element in the management of the socialist enterprise which is manifested through individual production costs. Only as a result of an efficiently functioning accounting of and control over individual production costs at enterprises is it possible to determine branch (zonal) production costs, to influence them, and hence to influence the individual and social value of the commodity, to correctly fix prices. Individual value plays a great role in the rational local of production. In some cases individual value appears as the direct basis of prices for commodities of the local market (local fuel, local building materials, some consumer goods prepared with local raw materials and scrap). As we see, the interaction of social and individual value is an important feature of the planned organization of the socialist economy.

ON THE RELATIONSHIPS OF THE SUM OF PRICES AND THE SUM OF VALUES OF COMMODITIES

In connection with the fact that in the final prices of articles of consumption their whole value is realized while the prices of means of production are set at a level below their values, the sum of prices of means of production and articles of consumption, naturally, will not express their full value: it will be below the full sum of values by as much as the prices of means of production are below their values.

Some economists think that the sum of prices of means of production and articles of consumption is always equal to their total value. From this formulation they arrive at the conclusion that articles of consumption are sold at prices which are above their values because means of production are realized at prices which are below their values.

However, if one takes the position of the "mutually compensating" deviation of prices of means of production and articles of consumption from their values one cannot understand our practice of price formation and the measures taken in this sphere in recent years. For example, as a result of the reform of wholesale prices in 1949 the prices of means of production were brought closer to their values. According to the above formulation this should have automatically reduced the excess of retail prices above the values of articles of consumption although, as we know, the reform of wholesale prices in 1949 had no influence on the level of retail prices and could not change the magnitude of value of articles of consumption. In essence, the view of the "mutually compensating" deviations of prices signifies that by means of changes in the prices of products of heavy industry it is possible to bring retail prices of articles of consumption closer to or further from their values.

The formulation being examined is even more puzzling if we attempt, with its principles, to analyze the practice of price formation for agricultural output. As we know, the establishment of procurement prices for agricultural products somewhat below their values arises from the economic inter-relationships between the state and collective farms and cannot be of a temporary nature. If we start from the formulation cited above we must conclude that retail prices will always be above the values of articles of consumption.

In reality the full value of articles of consumption is realized in retail prices.(9) In the prices of socialist enterprises producing industrial and agricultural output only part of the surplus product is realized. The final prices of means of production and articles of consumption have a relatively independent character (although they are interconnected) which makes it possible (within certain limits) to change some prices while maintaining the stability of others, and this is a positive feature of the price system in the USSR. As a result of the reform of wholesale prices in 1949 and the price increase for products of state and collective farms the deviation of prices from the values of means of production diminished sharply, the price structure of articles of consumption changed substantially (production costs grew and the turnover tax declined). But this does not in the least signify that the relationship between prices and values of articles of consumption was automatically changed.

The view held by some economists that the sum of prices of all produced commodities is always equal to their total values not only does not correspond to our practice but is not in accord with the practice of the capitalist economy.

As we know, in analyzing the process of capitalist production for the purpose of revealing the internal mechanisms of its operation in their pure form Marx started with the assumption that commodities (including labor power) are sold at their values, that the sum of prices of commodities is equal to the sum of their values, and so on. But from this it does not at all follow that in reality the sum of prices is always equal to the sum of values of commodities. Marx showed that the operation of the law of value under capitalism is connected with constant deviations not only of prices from the values of individual commodities but also of the sum of all prices of commodities from their aggregate values depending on the phase of the cycle.(10) Hence, the equality of the sum of prices of commodities and the sum of their values must be understood not arithmetically but in the sense of the relative conformity of the sum of prices and the sum of values of commodities manifested over long periods of time.

Some writers suppose that wholesale prices of means of production and retail prices of articles of consumption are respectively equal to the total value of each type of commodity but the values of means of production and articles of consumption are expressed in different levels of prices. Such a view contradicts reality. In the wholesale prices of industrial enterprises not all of the created net income is realized, but only part of it, and this part is insufficient for expanded reproduction in industry, not to speak of its participation in expenditures for the maintainence of the unproductive sector. This, in particular, is confirmed by the principle that wholesale prices of industrial enterprises, and hence, final prices of means of production do not express their full values. If we agree with the views of the economists referred to above we would conclude that Soviet money is not a uniform measure of value in different subdivisions of social production, that is, a universal equivalent. It must be said that some economists have come to this conclusion based on the very fact of the existence of a different level of prices for means of production and articles of consumption. But it is only if a universal equivalent is available that we can speak of a different level of prices and the utilization of the price mechanism for the redistribution of part of net income among the branches and subdivisions of social production. It is not at all that in price fixing for means of production and articles of consumption different money is used but that in a uniform type of money (with a uniform gold content of the ruble) total value is expressed in one case (the price of articles of consumption) while in the other case part of the value of the commodity is expressed (the price of means of production).

In Department II the means of production enter at prices which are below their values and in this connection the amount of realized net income in the prices of articles of consumption increases. But this means that it increases not because articles of consumption are sold at prices which are above their values but because the price of the means of production consumed here is below the value transferred.

Thus, the practice of price formation in the USSR shows that in the socialist economy the formula of the equality (correspondence) of the sums of prices and the sum of values of commodities and the "mutually compensating" deviations of prices from the values of individual commodities is applicable only to articles of consumption and not to the whole mass of commodities including means of production and articles of consumption.

ON PRICES AND THE RELATIONSHIPS OF DEMAND AND SUPPLY OF COMMODITIES

In the course of the discussion the question of the influence of the demand and supply of commodities on the process of price formation under socialism was considered This relationship is of great importance in establishing retail prices at which the sale of consumer goods is primarily conducted. Demand and supply influence the prices of means of production to a certain extent, particularly now when the transition to the free sale of agricultural machinery and other means of production to collective farms and state farms is being completed. A greater utilization of the commodity form of means of production assumes influencing the demand and production of means of production by means of price. However, in a socialist economy the influence of demand and supply on prices of means of production is extremely restricted.

In noting the important role of demand and supply relationships in price formation for consumer goods some economists, in our view, have committed a substantial theoretical error. Thus, D. Kondrashev thinks that the sum of prices of all articles of consumption is determined depending on the money incomes of all groups of the population ("Problems of Economics," 1957, no. 5, p. 74). Comrade Minc holds that the value of articles of consumption is equal to the sum of money incomes of the population after taking into account changes in the condition of money stocks and the savings of the population. If the sum of prices of articles of consumption, writes comrade Minc, is equal to the money incomes of the population it means that it corresponds to the value of articles of consumption. If the sum of prices of articles of consumption is less than or greater than the sum of money incomes of the population it means that prices have been set correspondingly below or above value ("Problems of Economics," 1958, no. 1, p. 97).

From this position B. Minc can conclude that the value o articles of consumption expresses not the expenditures of social labor embodied in them but the purchasing power demand of the population which is, as we know, the result of the distribution of newly created value. With a given value of articles of consumption the purchasing power demand ca change depending on how the national income is distributed and utilized in the final analysis but the magnitude of value of commodities does not depend on the processes of distribution.

We must distinguish two different questions: the relationships of retail prices and the values of articles of consumption, and the utilization of retail prices as a means of achieving a correspondence between demand and supply of commodities. These questions are undoubtedly interconnected but each of them is of independent significance.

The correspondence of the sum of retail prices for all articles of consumption and their values is attained if the sum of prices includes an amount which reimburses the costs of production and circulation of socialist enterprises and the net income created which is necessary for expanding production and maintaining the unproductive sector. But this does not yet mean that the sum of retail prices of all articles of consumption will necessarily correspond to purchasing power demand.

It is, of course, impossible to hold that any change in the level of retail prices as a result of changing relationships of demand and supply also signifies a corresponding change in the values of articles of consumption. This does not correspond to reality. For example, in connection with demand and supply conditions the price of light automobiles was raised somewhat in 1958. However, there is no basis for thinking that this was called for by an increase in the value of these commodities.

Basic reliance in coordinating demand and supply must be placed on production and not on retail prices. It is true that if the sum of prices of commodities is insufficient to meet demand (and this is a sign that retail prices are set below their values) only one conclusion follows: retail prices must be raised and correspondence will be achieved in the market. Meanwhile, the correspondence of demand and supply is one of the most important national economic proportions. Although it is manifested on the market, in the process of exchange, it is conditioned by the development of material production. The principal role in achieving a correspondence between demand and supply of commodities belongs to production which must develop by taking account of demand and the vital needs of the population.

The adherents of the conception that the value of articles of consumption and consequently their prices are determined by the money incomes of the population cite the fact that a certain part of the value of the social product is included in the money incomes of the population and that if state retail prices do not adequately take account of the relationship of the demand and supply of commodities this will be reflected in prices at collective farm markets: these will depart from state prices and exceed their level. However, it should not be forgotten that it is through prices of articles of consumption that a partial redistribution of incomes, including the necessary product, can be achieved. Such phenomena may be observed in the movement of collective farm market prices when they exceed state retail prices but this does not necessarily mean that state prices are set below the values of articles of consumption.

Hence, one must not confuse the question of the relationships between prices and values of articles of consumption with the question of the relationships between the demand and supply of commodities. Although retail price plays an important role in the planned conformity of demand and supply under socialism it still appears as a secondary factor, priority being vested in production.

In order to establish a correct relationship between demand and supply it is not enough that the general sum of retail prices of articles of consumption be equal to the aggregate amount of purchasing power demand. It is important that the structure of commodity supply correspond to the structure of consumer demand. In solving these problems one cannot confine oneself to the balance of money incomes and expenditures of the population which reflect only the general volume of retail commodity circulation. It must be supplemented, in our view, by a balance of demand and supply of consumer goods.

The utilization of retail prices to achieve conformity of demand and supply assumes a deviation of prices for individual commodities above and below their values, with these deviations occasionally being quite considerable. But we must not exceed the limits of economically permissible deviations of prices from values so that the low prices of some commodities do not lead to the unprofitability of their production and do not create the grounds for speculation while unjustifiably high prices for other commodities do not hinder their realization. It is also necessary to consider the need for correct relationships of prices for individual commodities, particularly interchangeable ones, for the maintenance of relatively low prices for necessities, children's products and so on. Hence, it is not a matter of mechanically adapting retail prices to demand but of having the relationship of prices promote a rational utilization of commodity resources, an increase in the well-being of the broad masses, an improvement in the structure of consumption, in the assortment and quality of commodities in accord with the needs of the population.

Thus, prices of articles of consumption in a socialist economy must be established in a planned manner on the basis of their values manifested in money form as the costs of production and circulation of socialist enterprises and as net income, after taking account of the relationships between the demand and supply of commodities as well as the necessary effect on the demand and production of commodities.

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FROM THE EDITORS

The discussion on the utilization of the law of value and the means of improving price formation in the USSR which was conducted in the pages of "Problems of Economics" beginning with no. 2 of 1957 has yielded rich and many-sided materials and revealed different points of view which helps in the elaboration of correct methods of solving a number of practical problems in this sphere. However, the complexity and inadequate elaboration of these questions requires further discussion.

In continuing the discussion the editors are also presenting for wider consideration the question of the causes and nature of commodity production under socialism.

The position of the editors on questions of the utilization of the law of value and price formation was basically reflected in the report and concluding remarks of L. M. Gatovsky at the scientific conference on the question of the law of value and its utilization in the national economy of the USSR (no. 8 of "Problems of Economics" for 1957 and no. 9 of "Communist" for 1957 which contains the basic content of the report), in the article of A. G. Kulikov (no. 9 of "Problems of Economics" for 1957), and in the review of unpublished articles and letters (no. 2 of "Problems of Economics" for 1958).

The editors are in basic agreement with the formulations on the main principles of price formation expressed in the present article of A. G. Kulikov which presents some preliminary results of the discussion at this stage. The editors consider that the considerable improvement of the price system which has been carried out in recent years has meant that prices have been set relatively closer to their basis — value. This process must be continued further by eliminating the excessive, economically unjustified deviations of prices from values, the unjustified diversity of prices and profits which hinders a more effective utilization of the mechanism of the law of value, prices, cost accounting, the principle of profitability, and so on. This will permit a better utilization of price as a means of accounting and stimulation of social labor. It is necessary to continue the course of eliminating unprofitable enterprises and the practice of subsidies, of increasing the role of profits in all of the economic activity of the enterprise in the interests of improving the fulfillment of the state plan. This assumes an increase in the prices of means of production in certain cases. At the same time the editors consider as incorrect the view of some writers on the necessity for a complete correspondence of prices with values or with "prices of production" as well as the proposal for a sweeping increase of prices of means of production to the "level of prices of articles of consumption." The general line of price formation is one of price reduction. Bringing prices closer to values must proceed chiefly through reductions in production costs. Certain deviations of prices from values (particularly for means of production) are dictated by economic necessity. Under socialism, and this is one of its advantages, the law of the average rate of profit does not operate and there exists the possibility and necessity (with a unified price policy) for a differentiated approach to each type of production which is very important for socialist planning. All of these formulations have been concretely developed in the pages of the journal in the process of the discussion. In agreeing with the basic formulations cited above in A. G. Kulikov's article the editors consider as disputable his treatment of the question of the relationships of the sum of prices and the sum of values and hold that it requires further elaboration.

FOOTNOTES

(1) Author's estimates. In net income, as the element of the price of industrial output realized in excess of its production costs, we include: in 1924/25 and 1926/27 — profits of industry, excise duties, taxes, collections, rent (see "Control Figures of the National Economy of the USSR for 1928/29," Planned Economy Publishing House, 1929, p. 286), and in 1955 — profits and the turnover tax (along with stumppage fees). Currently prevailing wholesale prices were established on July 1, 1955; hence the data are presented for the second half of 1955.

(2) M. Sakov justifiably points to the inexactness of the formulation on bringing the wholesale prices of means of production close to the level of retail prices of articles of consumption. In such a case, the prices of means of production would be higher than the level of wholesale industrial prices of articles of consumption by the amount of distribution costs.

(3) K. Marx, Capital, Vol. III, p. 273.

(4) This is noted and, in one degree or another, supported in the articles of P. Grudinskii, L. Maizenberg, B. Minc, P. Mstislavskii, Sh. Turetskii, and others.

(5) This question is thoroughly examined in I. Malyshev's article ("Problems of Economics," 1957, no. 3).

(6) This position is supported in L. Maizenberg's article ("Problems of Economics," 1957, no. 7).

(7) In most cases wholesale industrial prices (the price of the wholesale link) appear directly as the difference between the retail price of a commodity and distribution costs. Part of the value of the surplus product of industry is granted to trading enterprises in order to cover net cost of circulation and the formation of their profits. The creation of that part of the value of the commodity which compensates for distribution costs also involves the labor of workers in the sphere of circulation which is connected wit the extension of the process of production into the sphere of circulation.

(8) We do not go into these details here since they are presented in M. Moiseyev's article ("Problems of Economics," 1958, no. 7) with whose basic position we agree. We only want to note that in price fixing for collective farm output we must consider the necessity of drawing relatively poor land into circulation if this is called for by the country's needs. One of the objects of zonal price differentiation is to draw into circulation, in necessary cases, land which is located in areas with relative unfavorable conditions of production.

(9) However, as an analysis of prices shows, in certain periods retail prices of necessity were used for a partial redistribution of the necessary product (such a situation, for example, occurred during the years of the Great Patriotic War).

(10) This was noted in the articles of A. Bachurin ("Problems of Economics," 1957, no. 2) and A. Smirnov (ibid., 1957, no. 6).

JUNE

Editorial

STATE INTERESTS AT THE CENTER OF ATTENTION

Lenin, characterizing the large-scale machine industry as the source and foundation of socialism, emphasized that it "requires unconditional and strict obedience to one will which directs the common work of hundreds, thousands and tens of thousands of men. This necessity is evident technically, economically, and historically to all who have thought about socialism; it was always recognized as its condition." At the same time Lenin showed that centralism, understood in its democratic sense, presupposes "the possibility of full and uninterrupted development not only of local peculiarities, but also of local initiative of the variety of methods, ways and means of movements to the common goal." Unity in essentials is ensured by variety in details.

About a year ago the industrial and construction management system was reorganized, which ensured the further creative development of Lenin's principles of democratic centralism. On the whole results are good. As Comrade Khrushchev said on May 31, 1958, never has our industry worked as well as it does now. The 1958 plan for the first quarter was overfulfilled by four per cent. However, rational utilization of the tremendous possibilities in increasing production, and stricter state discipline are required. The cases of sectionalism (when local interests are placed ahead of the national interests) stand in the way of such discipline and should be rooted out.

The decision of the Supreme Soviet Presidium, April 24, 1958 requires management and other responsible persons to fulfill deliveries to other economic-administrative regions and union republics. Nonfulfillment will be considered as a rude violation of discipline and will be punished. In more serious cases managers will be considered criminal offenders and punished accordingly.

The fulfillment of obligations to other economic regions and republics is the first commandment of the leaders of the economic councils and concerns. Yet there have been violations of state discipline. Krasnoyarsk Economic Council, supplying lumber products to 70 economic regions of the country, failed to fulfill deliveries to other economic councils this and the preceding year. A number of machine building concerns of Belorussia did the same. The products which were to be sent elsewhere were used for local needs. Some economic councils are lagging in capital construction (Altai, Kursk, Irkutsk, Krasnoyarsk, Bashkiriya, Vologda and others). Some economic councils instead of searching for additional sources of materials to build houses use their working capital, and transfer workers from other sections to such construction. Many concerns overspend their wage fund, forgetting that the productivity of labor should grow faster than the growth of wages. Only in this way will socialist accumulations grow and economic plans be fulfilled. Responsible persons should watch the carrying out of the plan for the wage fund and insure the planned increase of labor productivity.

Overexpenditure of the wage fund is the grossest violation of state discipline.

All this shows that control over the economic activities of the concerns and construction sites should be strengthened. We especially should improve control by the financial and banking organs and raise the role of the USSR Industrial Bank in this field.

Combination of centralized guidance of the economy with local initative, and the maximum development of the creative activity of the broadest masses will make it possible to use better and more fully the advantages of the planned socialist system of economy for the most rapid growth of the productive forces and the people's welfare.

I. Zhegalin [Secretary of the Stalingrad Regional Committee, CPSU.]

THE REORGANIZATION OF THE MTS AND SOME QUESTIONS OF THE FURTHER DEVELOPMENT OF THE STALINGRAD COLLECTIVE FARMS

Between 1949 and 1957 the collective farms of the Stalingrad region became larger through mergers and growth as may be seen from the following data:

Averages per collective farm of Stalingrad region

	Total area ha	Plowed land ha	Workers	Cattle	Pigs	Sheep	Poultry
1949	5,195	2,788	133	236	45	930	329
1957	10,748	5,305	311	613	325	2,214	2,041

The collective farms were also strengthened with machinery and personnel, while incomes increased more than four times.

Following the decision of the government 171 collective farms (out of the total of 530) as of May 1, 1958, bought machines and 179 others will do the same before December 31, 1958. Three collective farms will pay for the machines in full in 1958; 59 in two years; 193 in three years, 30 in four; and 65 in five years. Forty-one MTS became RTS; 45 others became RTS branches; 47 MTS will continue to serve 159 collective farms and 21 will be served by RTS. Fifteen MTS are being liquidated, their buildings and equipment sold to the collective farms. A number of collective farms merged to form bigger stronger farms around RTS which become the center of the new collective farm. Yet it would not be advisible to concentrate everything in the center, because of the dispersion of the villages and farmers' unwillingness to move. Some small collective farms voluntarily joined the state farms because they happened to be closer to them than to MTS and too weak to stand by themselves.

The Stalingrad soils are good, and there is plenty of sunshine, but spring and early summer weather is uncertain and droughts frequent. So the problem of irrigation is extremely important. It is planned to expand greatly the irrigated area, producing vegetables and potatoes. One of the problems now facing the region is the adjustment of machines to local conditions (dry, firm soil, avoidance of furrows, machines which would cut straw low because local cereals in good years are only 60-70 cm. high).

It is expected that by January 1, 1959 the value of the basic funds of the collective farms will reach 1,400 million rubles, having increased in 1958 by 400 to 450 million rubles. In view of their size the question of forming a depreciation fund becomes important, just as does the question of working capital (the need to pay for work, materials, lubricants, spare parts, etc.). Each collective farm would need about 500 thousand rubles. The state bank should open credits for this purpose.

Now the importance of cost accounting becomes especially great. For example, Kiev collective farm increased its income from 800 thousand rubles in 1954 to 2.5 million rubles in 1957, and it was assumed that everything was going fine: no cost of production was calculated up to the end of 1956. Yet an analysis of the costs at that time showed excessive costs and inconsistencies. For example, the state paid the collective farm 410 rubles for one centner of beef, but the farm paid itself 586 rubles for labor. As a result of this analysis the system of payments was changed from payments by the number of cattle served to payment in terms of increase in weight of animals, as a result of which the members' earnings remained the same but the cost was cut down by 50 to 60 per cent.

The problems Stalingrad collective farms face now are: 1) bringing lagging collective farms to the level of the best; 2) opening fallow and virgin lands of which there are hundreds of thousands of ha; 3) increasing yields, expanding the area of vegetables and orchards; 4) doubling mustard production; 5) increasing the feed supply for livestock (it is possible to harvest two crops of grain feed a year in the southern part of the region); 6) increasing sharply the number of hogs and poultry. It is expected that the number of cows will reach 194 thousand by the end of 1958 (an increase of 18% as compared with 1957), and the average yield of milk per cow 1,900 kg on the collective farms and 2,200 kg on the state farms.

A. Pashkov

CONCERNING ONE APPROACH TO THE LAW OF THE MORE RAPID GROWTH OF PRODUCTION OF MEANS OF PRODUCTION

Bronislaw Minc, a Polish economist, at the economic session of the economists of the socialist states (Moscow, November 1957), in an article published in the Polish magazine, Economista (No. 5, 1956) as well as in his book Problems of the Political Economy of Socialism, 2nd ed., Warsaw, 1957, denies the action of the law of the more rapid growth of the means of production (as compared with the means of consumption) both under capitalism and socialism. There is no such a law; there is only a tendency of an historical character which takes an upper hand at some periods, especially during an industrial revolution. According to Minc four factors influence the relation of the rate of growth of the two subdivisions of social production: 1) the structure of production, i.e. the share of production, consumption and national income in the gross product; 2) the share of accumulation in national income; 3) the relationship of the accumulation of means of production to the accumulation of the means of consumption in total accumulation; 4) the structure of foreign trade. Each question may be approached theoretically or concretely. Marx and Lenin followed the first method because only this method allows one to discover the action of laws. Of course, factors cited by Minc influence the relation between the two subdivisions, but there are also others. The more such factors are investigated in their concrete economic aspect, the better. Yet the basis of such an anlysis is the understanding of the basic economic law governing the ratio. Minc asserts, for example, that the development of capitalism is accompanied by a reduction of material expenditures per unit of labor. But he forgets that technical progress results in a reduction of labor required. This is true not only for the period of the improvement of machines. And there is no reason to assume that automation leads to the lowering of the organic structure of capital.

To prove his point Minc cites a table of the ratio between the two divisions in Britain in 1950. But the effectiveness of a law cannot be determined from the data for one country in some particular year. Here we need data for several countries at various periods of their development. To deny the action of this law means to forget technical progress and the growth of the productivity of social labor.

Minc asserts that Marx based his conclusions on data relating to the first period of the industrial revolution, while Lenin wrote in a period when technical progress in Russia was directed mainly at saving labor and not capital. But when Marx wrote his work, the industrial revolution was far behind. Lenin's formulation was based on the economic teachings of Marx.

Minc denies the action of this law in a socialist economy, considering that the decisive influence is to economize the means of production; he denies the inner connection between the more rapid growth of the means of production. According to him the action of the tendency has an historical, not absolute character. He thinks that constant application of the principle of the more rapid growth of the means of production may lead to overinvestment and asserts that even in the Soviet Union this was not always the accepted view, citing the decisions of the 17th Congress of the Party (1934).

But this law should not be understood mechanically, as if the rate of growth in Department I is always higher than in the Department II: a rapid growth of Department I in the preceding years may result in a higher rate for Department II in some years, but this is not a refutation of the law.

I. Usatov

THE ROLE PLAYED BY THE FUNDS OF THE CONCERNS SHOULD BE INCREASED

Making workers interested in the results of their work through material incentives is very important. This is realized in the USSR through the existing system of wages, the use of profits, various kinds of remuneration and bonuses. Among these forms an important role belongs to the funds of the concern for the improvement of the cultural and living conditions of workers and for the improvement of production. In 1956 the total of these funds amounted to 3,500 million rubles of which two billion rubles were those of industrial concerns. At the First Ballbearing Plant 3.5 million rubles were set aside as the fund of the plant. These 3.5 million rubles and the balance from the preceding years were used as follows: construction of buildings for the kindergarten; 425,000 rubles for workers' vacations, 325,000 rubles for individual needs and 1.1 million rubles for bonuses. With money from such a fund the Moscow Caliber Plant built a pioneer camp, bought equipment for its polyclinics, Club and "Red Corner" (700,000 rubles); 800,000 rubles were spent on bonuses. Great possibilities now exist for using this fund for housing construction. (In Gorky such expenses on housing constituted 7% of the total sum appropriated in the region for this purpose.)

Unfortunately the distribution of charges to such funds is unequal in very similar situations. These charges are based on the general level of expenditures and planned rentability and are expressed as a percentage of the savings made; but he structure of the costs is not taken into consideration. If here are many workers in a concern and the basic funds are small, the fund per capita will be small; in a concern where he basic funds are large and the workers few, it will be arge. We must devise a system of price formation in which equal amounts of labor will create equal values or we should differentiate the rates of fund charges so that they reflect value deviations in labor productivity in each concern. Instead of changing the existing system of price formation it would be better to change the rate of the fund charges so hat per worker it will result in the same or approximately he same amount.

This will not lead to bonuses for concerns with backward technology and poor labor organization. The personnel of each concern will be encouraged to apply new techniques and to lower the share of wages in the cost of the product through increased fund charges from the profits made above the planned profit.

The author is against a suggestion made by Karagdeov (Finances of the USSR, No. 6, 1957) to make the fund charges dependent upon the fulfillment of the accumulation plan, expressing them as a percentage of the wage fund. It may happen that the whole profit of the concern will not be sufficient for the purpose. From where then should the money be obtained? From the state budget? The author is also against the suggestion by Zhukov (Problems of Economics, No. 4, 1957): if the expected profit is 5%, 10% of it should go into the fund, if 6%, then 20%, etc. But the difference in the level of profits is not the only cause of unequal distribution of funds per capita. Moreover, the difference in the share of wages is not considered here. Another suggestion advanced is the creation of a single fund from the net income which should become a part of the costs. But then bonuses would depend upon total results while the interests of production require granting bonuses independent of the total results.

Not only is the size of the fund important, but also how it is spent. Such a fund should be spent on bonuses to individual workers, on improvement of cultural and living conditions, on housing. But the means needed for the application of new technology, modernization and working capital should be obtained from the banks and not from such funds.

Stefan Sharenkov [People's Republic of Bulgaria]

THE ROLE OF ECONOMIC COLLABORATION AND THE INTERNATIONAL DIVISION OF LABOR IN THE BUILDING OF SOCIALISM IN BULGARIA

In the past Bulgaria was an agrarian-raw materials' appendix and dumping ground for foreign monopoly capital, especially German capital. A weakly developed industry, a backward, parcellized agriculture, a beggarly standard of living — such was Bulgaria in 1938.

The existence of the world socialist economic system and the new international division of labor helped the industrialization of Bulgaria and at the same time made it unnecessary for her to develop all branches of heavy industry. This made it possible to save capital and labor power and make the most rational use of her economic and natural resources.

The foreign trade of Bulgaria with the socialist countries is developed according to the principle of full equality, mutual advantage, and brotherly mutual help on the basis of agreements on mutual deliveries. Trade increased from 1.8 billion levas in 1950 to 4.45 billion levas in 1957. Trade with the socialist countries comprises 84% of the total. First place is occupied by the USSR (53.4% of the total), second by Czechoslovakia (11.8%) and third by East Germany (8.3%).

Bulgaria now exports not only agricultural products, but also ores, machines, ships etc. More than 50% of her imports consist of fuel and raw materials. She also obtains equipment, machines and complete plants from the USSR, East Germany, Czechoslovakia, and Hungary.

An important role was played in her industrialization by the long-term loans of the USSR. In 1947 Bulgaria received 123.5 rubles; in 1948 212 million rubles; in 1956 — 370 million rubles; in 1957 — 200 million rubles; a total of 7.8 billion levas or 25% of the total investment funds in Bulgaria during 1948-1956. Czechoslovakia opened up a credit of 160 million rubles in 1951; Poland and Hungary also opened credits. In turn Bulgaria helped Albania, Korea, and Hungary. Scientific and technical collaboration is of great help. Bulgaria obtains from other socialist countries designs, blueprints and technological processes which represent tremendous savings in time and money.

As a result of all this the socialist sector was responsible for 98% of Bulgaria's gross industrial product in 1957, 87% of the gross product in agriculture and 100% of the retail turnover. In 1939 the ratio between agricultural and industrial production was 75.2: 24.8; in 1957 it was 31.7: 68.3. Since 1939 industrial production increased eight times. The annual average rate of growth in the last ten years was 15%. Production of means of production gained as compared with production of consumption goods (the ratio between them was 23:77 in 1939 and 45:55 in 1957). Since 1939 production of power increased ten times and reached 2.7 billion kwh; production of coal — five times and reached 12 million tons. The Republic has open-hearth furnaces and is building a plant with a capacity of one million tons of steel.

The international division of labor among the socialist countries made it possible for Bulgaria to increase greatly the production not only of heavy industry, but also of the light and food industries, to mechanize agriculture and to increase the irrigated area ten times. Through an agreement among Bulgaria, the USSR, East Germany, and Czechoslovakia Bulgaria greatly increased her production of grapes, fruits, and vegetables at the expense of wheat and cotton which she will get from the USSR. By 1970 she will export more than one million tons of grapes, other fruits, vegetables, and especially tomatoes.

"The basis of our further development is the comprehensive expansion and strengthening of the economic relations and collaboration with the countries of the socialist camp headed by the Soviet Union. This collaboration... opens tremendous possibilities for the development of the productive forces of our country, for the planned and highly effective division of labor in the framework of the world socialist system." (Yugov, Chairman of the Council of Ministers).

DISCUSSIONS AND DELIBERATIONS

M. Makarova

Economic Ties of the Cities and Villages Under the New Conditions

In our economic literature commodity relations between the cities and the villages were considered as unimportant, supplementing non-commodity relations, and it was thought that they are an obstacle to communism, they should be narrowed down and replaced with a direct exchange of goods. Underestimation of commodity relations between the cities and villages was to a certain degree a reflection of relations between industry and agriculture brought about by the general situation. At the time of the formation of the MTS there were not enough machines; the collective farms were small and could not buy machines. Finally, there was a shortage of agricultural products. Payments in kind to the MTS were of great importance to the state which obtained in this way about one billion poods of grain (from 30 to 60% of the grain depending upon the yields). All this will now be changed.

With the reorganization of the MTS production relations between the cities and the villages will be based on money, a more elastic form which gives more scope to the development of independence of the collective farms and their initiative. A question arises here: what will be the relations between the organized sale of products to the state and the unorganized kolkhoz market? Technical cultures such as cotton, flax and sugar beets have to be sold by necessity to the state, because there is no demand for them on the kolkhoz market. As to other products, the collective farms will be even more interested than formerly in selling them at prices which would cover costs. The law of value is more important for the collective farms than for the state concerns. Some state concerns for a number of years have been incurring losses even according to plan: their prices do not cover costs; but the state does not pay subsidies to the collective farms.

Former mistakes in this field have been corrected. In 1952 collective farms received from sales to the state 27 billion and from sales on the free market 53.7 billion rubles. In 1956 the sales to the state amounted to 81.3 billion rubles and to the free market 42 billion rubles. Sales on the free market were increasing, but slower than the sales to the state.

With the development of the productive forces, the growth of labor productivity and of the supply of goods, the organized forms of kolkhoz sales will develop further, prices on the kolkhoz market will go down and the collective farms will be more and more interested in selling goods to the state. Under the former system of low purchasing prices agricultural machines were sold below their cost. Between 1946 and 1956 the budget appropriations for the MTS amounted to 217.6 billion rubles. Tractor work alone cost the state some 20 billion rubles a year.

The new prices should be single prices for the same product, and in fixing them, the prices of the free market should be taken into consideration to some degree. The most important objective criterion in planning agricultural prices should be the average, socially necessary expenditure of labor for the production of grain and other products.

The decisions of the CP and of the Soviet Government concerning the further development of the kolkhoz regime are of great international importance. Speaking of the new economic policy in 1921 Lenin said: "The problem we are solving now for the time being — temporarily — alone, looks as if it is a purely Russian problem but actually it is a problem which will stand before all socialists..."

A search for the new is always connected with certain difficulties and expenses. But because of that the new-found forms of communist construction become more valuable for other countries which can utilize them with due consideration for their national features.

G. Bakulev

About Basic Criteria and Indices of Economic Effectivity of Capital Investments in Industry

Under socialism capital construction is based on the conscious use of the law of planned proportional development of the national economy. The proportions are determined by state plans for the development of the national economy. The distribution of capital investments among branches is determined by: 1) the method of balances; 2) by economic justification of construction, expansion, modernization, etc.

However, the method of balances does not provide all the answers. It makes possible the determination of quantitativ proportions only as first approximations. Through it we cannot determine the volume of the product which can be obtained through modernization or technical reconstruction. Through the method of balances we may determine the need of the economy for fuel and power; but such important questions as economic advantages of one kind of fuel over anothe remain unanswered. We have to add a comprehensive analysis of the effectiveness of capital investments. For example if the labor expenditure on coal (in terms of theoretical fuel in the USSR is taken as 100, open-cut mined coal is 15.9, Tartar petroleum 6.1, natural gas 6.1. If the average cost of coal in the USSR is 100, then that of Moscow coal 151.1, open-cut mined coal 24.6, Tartar petroleum 10.5, natural gas 13.0. The cost of these fuels, in Moscow, including transportation to Moscow, is: Moscow coal 108.6, Donets coal 100, Baku petroleum 83.3, Tartar petroleum 22.6, natural gas 41.8. Relative investments per ton increase of theo retical fuel (the average for the USSR 100) are as follows: Moscow coal 382, Baku petroleum 271; Tartar petroleum 27 natural gas 71. These data show that natural gas, Tartar petroleum and open-cut mined coal are the most economical Yet they (and especially natural gas) received a very small part of capital investments in the Fifth Five-Year Plan, as a result of which the consumption of fuel in the USSR was distributed in 1955 as follows: coal 77.8% of the total, petroleu 8.2%; gas 2.4%; peat 4.6; oil shale 0.7, firewood 6.3%; while in the United States in recent years coal occupied only 33%; gas 24%; and petroleum 43%.

Another example: open-cut mined coal increased labor productivity from five to six times and lowered the cost of coal from three to four times and capital investments 1.5 to 2 times. Important results can be obtained through burning coal underground and through the hydraulic method of mining.

Generally Soviet economists agree that the criterion of economic effectiveness of capital investments should be the greatest increase of the national income through capital investment measured by maximal productivity of labor and minimal expenditure of social labor per unit of the product.

Certain obstacles obstruct the use of this criterion. Unde the present system of recording production it is impossible to express expenditures of social labor in money terms. W know the cost but we do not know the value, because the existing system of price formation is divorced from value. Means of production (except petroleum and power) do not pay the turnover tax; because of that the prices of these goods are below value.

It is time to remove the extreme diversity in rentability of different branches and diversity of prices and bring them closer to their value. Yet practice requires an answer tied to the existing system of recording and control of production. We must then use a system of indices. These indices should: a) bring us closer to the basic criterion of the economic effectiveness of capital investments — maximal increase of the national income per unit of capital investmen as measured by minimum expenditure of social labor; b) be calculable on the basis of plans and achievement reports. Different indices may be applied: a) to the development of individual branches of industry; b) to the various technical methods of production inside the same branches; and, c) to rationalization and improvements in the sections of the sa concern.

Concrete indices of the economic effectiveness of capital investments are:

1) in the construction of new industrial concerns and the expansion of the existing ones — productivity of labor, cost of the product, relative investments in the concerns of the given branch and the adjoining branches connected with it, and the length of the period in which capital investments pay for themselves.

2) in capital investments in new technique: labor productivity, cost of the product, the length of the period in which the capital investment pays for itself.

3) in capital investments in some particular improvement inside a concern — the length of the period in which it pays for itself, labor productivity.

The generation of power in large power hydroelectric stations is four to five times cheaper than in thermal power stations; but the former require great capital investments. An investigation made in 1957 showed that capital investments in the Bratsk power station will pay for themselves in nine years, in Krasnoyarsk station — in five years, in the Saratov station in ten years, in the Lower Kama in ten years, in Dneprodzerzhinsk — in 18 years, after which their energy will be very cheap (Bratsk and Krasnoyarsk power about one kopek per kwh.).

But which length of time should be considered normal? This question may be answered only through an analysis of relations between basic funds for production and the part of the national income for consumption.

On the basis of extensive collective work carried out in the design and construction organizations and research organs of the USSR over forty years it is possible to establish indices for the branches of the national economy which will help us to determine the effectiveness of capital investments.

CRITICISM AND BIBLIOGRAPHY

G. Grigoryev and K. Kostin

A Book About Economic Conceptions of Western German Social Democrats ("Zur oekonomischen Konzeption der SPD," Berlin, 1957, 243 pp.)

This collection of articles under the editorship of Herbert Meissner has as its purpose the presentation of the economic views of the Social Democrats of Western Germany. Meissner shows that the rightist leaders of the party see the main danger in the revolutionary tendencies of the working movement and not in the revival of imperialism. Socialism is for them no longer on the order of the day. More and more they move to the defense of capitalist private property. Capitalism for them is only a "definite style of society" and its character is determined not by production relations but by certain spiritual movements. According to them the Marxian definition of classes cannot be applied to contemporary capitalist reality: contemporary society is not divided into classes. The Social Democratic Party defends the most reactionary part of the contemporary bourgeoisie — the monopolistic bourgeoisie. They consider monopolies useful for the national economy: "cartels and monopolies are important components of the contemporary economy; in fact they can be potential elements of order and means of management."

Faulwetter shows that according to the Social Democratic Party value is created not only by labor but also by land and capital. They consider high wages the most important source of contemporary social difficulties: they lead to mass unemployment, crises, overproduction, inflation, etc.

Sieber shows that according to their theory wage policy should be directed to ensure political and social peace in the country. He demonstrates the growing exploitation of workers and increase in profits from five to nine times in the last few years.

Shellenberg examines views on the "second industrial revolution" and the danger to the working class from automation, a danger which worries the West German workers.

The authors limit their conclusions to the theoretical analysis of the economic concepts of the Social Democratic Party. Had they also presented facts characterizing the economic development of Western Germany, the value of the work would have been greatly increased.

REVIEWS

V. Kurakin

Measures for Improvement of the Management in Industry, Finances and Trade in the CPR

The years of the First Five-Year Plan in the CPR were years of centralization. This was dictated by a number of circumstances: sharpness of the class struggle and the necessity to build and strengthen the economic basis of socialism in a country where capitalist industry and trade occupied an important part in the national economy. Now that industry has been restored and the socialist transformation of capitalist industry and trade established, the primary base of socialist industrialization has been created and the planned development of the national economy is being successfully carried out, there is no need for such a degree of centralization. Moreover, many more concerns are now in operation and to manage them from the center becomes difficult. Great attention is now also being paid to the development of the formerly backward regions which have large resources of raw materials. They need more autonomy for the development of local resources.

On November 14, 1957, the representatives of the permanent committee of the Chinese People's Council approved a plan presented by Chou En-lai for the improvement of the system of management in industry, finance and trade.

China's industry is divided into industry centrally managed and locally managed. In 1957 the share of the first group amounted to 46.2% of the gross industrial product (including household industry) as compared with 31.8% in 1952. These are chiefly concerns producing means of production. In 1957 centrally managed industry produced 60% of country's means of production and about one-third (in terms of value) of the consumption goods, the rest being produced by industry locally managed.

Under the new system the large-scale heavy industry concerns remain in the hands of the center, while light and food industries are transferred to local management. The number of planned indices is reduced: out of 12 only four remain (the total volume of production for the most important kind of goods, the total number of manual and office workers, the total wage fund and the amount of profit). Local organs and concerns determine the gross value of the products, the new types of products, the percentage and amount of cost reduction, the number of workers at the end of the year, and average wages. Local concerns are guided by the center and by the local organs, though the main role belongs to the local organs.

Local initiative was formerly developed through management committees (a decision of 1950), consisting of administration and workers. The chairman was director and he carried out the decisions of the committee through his orders. This system resulted in some cases of directors' ignoring the decisions of the party organization and has been changed to a system of meetings of the representatives of the workers elected by the workers and responsible to them. The duty of the party committees is to combine the interests of the workers of an individual concern with the national interests. They also conduct political educational work, heading the struggle for the increase of production and economy of materials. The meeting of the representatives has a right to ask directors to report about the activity of the concern, examine plans, advance suggestions and recommend to the higher organs changes in directors' orders and their replacement.

In the field of finances local organs have 1) purely local incomes, 2) 20% of profits of the local concerns and 3) a share of the receipts from the turnover tax. If local incomes from these three sources are not sufficient to cover expenditures, the center provides a special subsidy. In the national autonomous regions all three kinds of income are considered local incomes.

Similar changes were made in the trade system, increasing local initiative, cutting down the number of indices centrally controlled (only four remain now — the plan for the purchase of goods, the plan of sales, the total number of workers and profits); the profits are shared by the center and local organs according to a certain ratio.

NOTES AND COMMUNICATIONS

I. Karnus, L. Schneiderman [Economists of the Stalin Electromechanical Plant in Kharkov]

About Economic Indices of a Plant's Section and Intrafactory Cost Control

In his report on the further improvement of the organization of industry and construction management Comrade Khrushchev pointed out that it is necessary to simplify the existing system and reduce sharply the number of reports and records, to reduce the number of primary records, and to mechanize the system.

Measures taken by the former ministries and the CSA in that direction were wrongly interpreted by some managers who weakened intrafactory cost control. In many concerns such controls are purely formal and do not serve as a stimulus to economize on materials, to increase labor productivity, etc.

Intrafactory cost control requires: 1) the application of expenditures per unit of product, per part, unit of machine, etc.; 2) timely recording of the necessary changes caused by the application of better technology, more rational layout of materials and use of wastes, replacement of expensive or short-supply materials with cheaper and more abundant materials, modernization of equipment, etc., 3) timely recording of the deviations from the approved standards in the process of work.

Among the indices on the basis of which the activity of a section is evaluated and bonuses distributed should be an index of the cost of goods according to standards. This will strengthen intrafactory cost control. We should also continuously compare the amount of used materials with the standards and not follow the principle "fulfill the plan at an price" which leads to hiding defective materials and writin off their cost as losses. Of course, "materials" is a very complicated element for control. If a change in standards is necessary, a permissive document must be prepared.

This control over the expenditure of materials also requires monthly inventories of unused materials, parts, unit etc. and a special report showing the use of materials as compared with standards. This monthly inventory should be required in all plants without exception; but we should mechanize the preparation of the records of the use of materials as compared with standards. All large and even average size plants have their own computing stations or use services of other plants or of the "Union Machine Control;" such stations process all data of the movement of materials from the base warehouse and have perforated cards on which there are recorded the nomenclature number of the material, the code number of the unit of measure and the price per unit of all materials available at the plant; they must also have a code for all the parts, units and goods produced by the plant and for the standards of expenditure of materials.

The monthly report should supply the following information: 1) the material; 2) its code number; 3) its code unit of measures; 4) price per unit; 5) the balance on the first of the month a) in the warehouse, b) in incompleted production, c) total; 6) added during the month a) from the bas warehouse, b) from other sections,c) the total; 7) grand tot (5c + 6c); 8) returned to the base warehouse; 9) losses through defective production according to records; 10) the balance on the first of the next month a) in the section warehouse, b) in incompleted production, c) total; 11) the grand total (8 + 9 + 10c); 12) actual expenditure of the material fo production of goods; 13) results a) economized i) in quantit ii) in money, b) overspent i) in quantity, ii) in money.

We must also make more precise the standards of expenditure per detail, part, or unit of machine, and carry out an inventory every month of materials which were not processed and those in an incompleted stage of production.

The economic councils should organize this work, render to the plants methodological and daily operative help in the mechanization of records and organization of special recor stations. These measures will help to strengthen intrafactory cost control.

SCIENTIFIC LIFE

A. Smirnov and I. Yermakov

Questions of Strengthening Cost Control in Industry

The reorganization of industrial and construction management created more favorable conditions for cost contro In view of this the discussion of these questions at a scientific conference in Sverdlovsk was very useful.

S. K. Tatur stated in his report that under present conditions we should aim at rentability, that is, a situation in which expenses of a concern are covered by its income. Economic councils should plan not only the ratio of profits to the basic and circulating means, but also their ratio to the value of goods produced. This would make it possible to use their means better. S. K. Tatur suggested increasin the responsibility of managers for the poor use of the basic and circulating means and greater differences in the size of the bonuses depending upon the actual savings achieved.

N. S. Spiridonova pointed out that cost control is important for increasing labor productivity; that its application will make it possible to find the causes of unproductive expenses and losses, to struggle with waste, lowering the individual and socially necessary expenditure of labor; the size of the bonus must depend upon the degree of reduction in costs (while fulfilling the plan of production).

V. I. Ganshtak stated that not enough attention is paid to intrafactory cost control; the goals for lowering costs are not sufficiently justified; the calculations of costs are too complicated; the analysis of the results is not done systematically. The connection between cost control and bonuses is not direct; indices for plant sections are frequently limited only to the volume of production and labor productivity. Cost control is especially poorly organized in subsidiary sections.

A. E. Gusinsky made a report about the experience of the Ural Car Plant in the organization of cost control.

A. B. Kopai-Gorodsky spoke of its application to power systems. I. P. Kuzmin showed that under the present system there is not enough stimulation for increasing the quality of production. Ural Electric Apparatus produces transformers from different steels. Though the price of these steels is different, the price of transformers is the same. Naturally then the plant tries to use cheaper steel; but the use of the more expensive steel would lower the loss of electricity in the transformers and result in savings to the economy. So "cost control" should not be in contradiction to the interests of the national economy.

L. Y. Kats shared the experience in cost control of the Kuznetsk metallurgical combine.

On the basis of suggestions made the conference considered it necessary to apply in planning practice indices of basic and circulating means of the concern (the sum of value of goods produced and the profit per 1,000 rubles of basic and circulating means). The prices of products obtained through cooperative deliveries should be lower than the prices of products from non-specialized plants (this would stimulate cooperation and specialization) and also the prices should be formed in such a way as to interest plants in the application of new technique. Bonuses should depend upon the actually achieved savings. The plans for the plants before becoming final should be discussed by their collectives. Cost control is not only a method of control closely connected with the attempts to save labor and materials; it is an objective category of socialism called for by the existence of socialist property in the means of production and requires a careful management of the collective economy. It is a mistake to apply cost control only in relations between concerns; it must be applied inside concerns though in a different form and its application is also important in agriculture.

D. Nikolayev

Discussion of Economic Problems at the Third Union Conference on Construction

In April, 1958, the Third Union Conference on Construction took place in Moscow. The theme of the conference was the improvement of the construction industry. Chairman of the USSR State Construction Commission V. Kucherenko reported that noticeable successes had been achieved in this field. For the first time the annual plan (for 1957) was carried out. Between 1954 and 1957 the number of workers on construction increased by 16% and the amount of work done by 47%. The number of workers per million rubles of construction work was reduced from 55 to 35, while their wages increased 30%. Beginning with 1955 the construction industry operated without losses and saved for the state 10.8 billion rubles. The material base was greatly strengthened. Production of cement in 1957 was 81% more than in 1953, of slate — more than doubled. Production of ferroconcrete increased 6 times. The value of all construction machines in 1937 was .5 billion rubles, now — 18 billion rubles. Basic funds of construction increased 35% in three years. The average time of construction was 24 months in 1954, 23 months in 1956 and 21 months in 1957.

The speakers at the conference noted that questions of construction are not yet studied on a proper scale, that many economic councils do not have their own designing organizations. The following problems have to be studied: economic effectiveness of capital investments, new technology and new solutions in construction, the development of the construction industry in the economic-administrative regions, the length of the construction period, labor productivity and wages, etc.

The basic factor for lowering costs is a good design and budget and good documentation. The existing designing prices are too high and should be reduced to correspond to the achievements of the last years. Great reserves exist in this industry (construction in Leningrad was 36.9% more expensive than the average). Moscow Ferroconcrete produces 3.2 times more products per sq. mt. than the average for the country. Centralized truck transportation reduces expenses by 25 to 30%. Too great a part of construction is incompleted. In the Irkutsk and other economic administrative regions the volume of such construction in 1957 considerably exceeded the volume of completed capital investments. We should also put an end to the dispersion of means in construction.

The importance of rational, economic designing in lowering the cost of housing was illustrated with the following examples. The construction of houses in large blocks on a free territory with properly determined density of buildings resulted in the lowering of costs by 3%. Selection of the proper construction solutions and materials lowers costs by another 5%. In the five-stories apartment built in Moscow by architect V. Lagutenko, the cost per square mt. was reduced 45% as compared with the average cost in Moscow in 1956. He utilizes the technical qualities of building materials. Every cub. mt. of ferroconcrete from foundation to the roof was utilized to its full capacity. In respect to the technical-economic characteristics this house has no equal either in the USSR or abroad.

The members of the conference approved a method of rolling ferroconcrete construction suggested by N. Kozlov. The weight of the house is reduced 2.5 times, the volume of the assembly work is reduced and the period of construction is shortened. The cost per one sq. mt. of such a house is about 1,000 rubles. If all these suggestions are realized in 1958-1959 only at 10% of the new houses under construction the savings would amount to tens of billions of rubles.

Utilization of assembled construction was recommended by N. Mikhailov. This would reduce expenditures of the concrete 1.5 times and of steel four times. Formerly the main problem of construction was mechanization of labor. Now it is complex mechanization of the construction industry. It and other improvements would lower costs by 20%. The organization of construction has improved; but there is room for further improvement. 20.2% of the 1957 plan was fulfilled in the first quarter and 27.6%, in the 4th quarter — the differences are still too great.

The key condition for the further growth of the construction industry is the continuous growth of labor productivity.

New Magazine 'Economic Sciences'

The USSR Ministry of Higher Education started publication of a quarterly, "Economic Sciences," for those who teach economics in higher schools. It will contain articles dealing with the results of research in the field of economic sciences, doctoral and candidates theses, surveys of scientific work of high institutions of learning, reviews, etc. Special attention will be given to the problems of political economy, the history of economic thought and national economy as well as articles on the economics of industry and agriculture, transportation and trade, labor, banking and money, planning and statistics.

The first issue of themagazine contains an editorial: "For the Further Development of Economic Science" and such articles as "The Solution of the USSR's Basic Economic Problem at the Present Stage," "The Character of Personal Property under Socialism," "Problem of Using the Law of Value in Capital Construction," "Wear and Tear of the Basic Funds and Their Replacement," "The Influence of the Length of the Production Cycle on the Working Capital Tied up in Uncompleted Production," "New Trends in the Organization of Labor and Wages in the Timber Industry," "Organization of the Work Week with the Seven-Hour Working Day," etc., etc.

Scientific Work of the Institute of Economics, Slovakian Academy of Sciences

The Institute has been in existence four years. It is doing research on problems which are of great importance for the development of the Czechoslovak national economy in general and Slovakia in particular and which will help to end the influence of bourgeois ideology in economic science.

The department of political economy studies the following problems: "Industrialization of Slovakia," "Slovakian economy during World War II," and the "History of political economy." Director of the Institute P. Turchan published a number of works on socialist industry of Slovakia and is completing a monograph on the role of Slovakia in the building material production base of socialism in the Czechoslovak Republic. It deals with the question of how to raise the level of Slovakia to that of the Czech regions. The effectiveness of Lenin's method of solving the national question through the economic growth of the formerly backward national regions on the basis of socialist industrialization receives new confirmation in the rapid growth of Slovak industry. Industrialization of this backward part of economically developed Czechoslovakia is of great international importance.

Of great importance also are works dealing with the economy of the so-called Slovak state and the economic ideas of ljudatstvo — the clerical fascist ideology of the Slovak reactionary bourgeoisie.

In the history of economic thought, investigation of the social, political, and economic views of L. Stur has been completed. He was a leader of the Slovak nationalist movement in the 1840's. In 1958 the institute began a study of contemporary bourgeois economic theories. The department of agriculture is studying basic problems of the state socialist sector in agriculture and the factors of agricultural cooperation. The department of industry studies categories of expenditures, income, rentability and specialization as the basic way to increase labor productivity.

Of great importance are scientific conferences and discussions on questions of industry, economics of the state farms, etc. The connection of the institute with foreign institutions has improved. The institute was visited by economists from socialist countries while Slovak economists visited the USSR, Rumania, Bulgaria, Eastern Germany, Yugoslavia and France. The Institute bimonthly publishes Ekonomicki Casopis.

P. T.

INTERNATIONAL SCIENTIFIC TIES OF THE ECONOMISTS

V. Dyachenko

A Conference on Questions of Peaceful Collaboration and International Understanding

From March 24 to April 3 an international scientific conference of economists took place in Bursa, Turkey. It was organized by the department of social sciences, UNESCO, and was attended by 22 experts from 14 countries. The aim of the conference was to reach mutual understanding throug discussion in order to encourage and strengthen peaceful collaboration of countries with different social systems. The first report by Dyachenko dealt with the planning of th national economy as a very important factor determining t high rate of growth of socialist production. The second report by E. A. G. Robinson (Great Britain) dealt with factor determining the general level and rate of growth of production. Robinson gave a classification of the factors which may help production and especially emphasized competitio and, as a rational criterion, the role of profits. The economists of the socialist countries emphasized factors on the side of production relations. They showed that the planned character of the economy is a more powerful factor than capitalist competition and the pursuit of profit.

Ignoring the peculiarities of the contemporary monopolis ic stage of capitalism the western economists minimized the role of capitalist monopolies, spoke of the advantages a "free market" and "free price formation" on the basis o supply and demand. They contrasted "free market" and competition with planning as a bureaucratic method of management. The economists of socialist countries showe the role of monopolies in contemporary capitalism, the re character of state intervention into the economic life, the inner contradictions of the capitalist system of economy, bringing about crises, unemployment, and insecurity.

Of great interest was a report by Kerncross (Great Bri ain) "Trade between countries of different economic and s cial systems" and Kajge (Czechoslovakia) "International d vision of labor as a factor helping the growth of productio Kerncross considers that the monopoly of foreign trade makes trade transactions unstable, delays them, and noted that planning is the main obstacle to the stable expansion the foreign trade.

The atmosphere at the conference was friendly. Prof. R N. Gardner (United States) was not successful in his attem to lead the conference away from the problems discussed. He assured the members that the USSR will not be able to catch up with and overtake the United States in per capita production because the absolute growth of industrial production in the USA is greater than in the USSR. He assert

(Continued on Page 101)

JULY

Editorial

A POWERFUL ECONOMIC STIMULUS FOR THE FURTHER UPSURGE OF AGRICULTURAL PRODUCTION

Socialist agriculture is developing at a high rate of growth. Between 1950 and 1953 the average rate of growth of the agricultural gross production in the USSR was 1.6% and in the USA — 1.7%. But between 1955 and 1957 the corresponding figures were 7.1 and 1.1. In a number of products Soviet production is greater than the production in the USA or is approaching the US level.

In June, 1958, the CC, CPSU, passed a resolution "concerning the abolition of compulsory deliveries and payments in kind for the work of the MTS, new procedures, prices, and conditions of procurement of agricultural products." This resolution is a new step on the way to the further development of the collective farms. Beginning with July 1, 1958, the kolkhoz compulsory deliveries of agricultural products to the state and payments in kind to the MTS and RTS are abolished. From now on the state will buy such products from the collective farms. It will be advisable to make plans of purchase for several years ahead; however the annual plans may be adjusted according to crop conditions. The indebtedness of the collective farms to the state for compulsory deliveries of the past years and for payments in kind to the MTS were written off. The new prices will be stable and changeable at the same time. They will be stable if conditions and yields are the same; they will be increased if the yields are low and reduced if yields are high. Each year the State Planning Commission will study materials presented by the republics about local conditions and will suggest changes to the USSR government. At the same time these suggestions will be presented to the Economic Commission of the Council of Nationalities of the USSR Supreme Soviet, making the final recommendations, which have to be approved by the Council of Ministers. The price established is a single price which will help greatly collective farms which were weak under the old system.

Beginning on July 1, 1958, single prices will be charged for tractors, trucks, combines, and other agricultural machines to all organizations. Gasoline will also be sold at the same retail price differentiated by zones. Other petroleum products, fertilizers, and metal products needed for repairs and the operation of machines will be sold at wholesale prices plus the cost of distribution.

Beginning with 1959 production plans for agricultural machine building (especially spare parts) will be based on orders of the collective farms and state farms. Machine building concerns will have to develop an assortment of machines (by zones) which will help to carry out the complex mechanization of agriculture.

In connection with these changes questions of price formation and of differential rent under socialism, questions of determining the cost of products on the collective farms, effectiveness of capital investments in agriculture, economic justification for various systems of economy (considering zonal differences) acquire special importance.

M. Moiseyev

THE NEW STAGE IN THE DEVELOPMENT OF THE ECONOMIC TIES BETWEEN INDUSTRY AND AGRICULTURE

The decisions of the June (1958) Plenum of the CC, CPSU, concerning the abolition of compulsory deliveries are directed at the further strengthening of the economic ties between industry and agriculture. The problem of state procurement of agricultural products has three aspects. First, it is important to determine how great a portion of products the collective farms can deliver to the state to supply the city population and industry. Here not so much the form of procurement is important as the state of production. Second, how much the state can spend on procurement of these products and how much the village will get for them. This determines the distribution of the national income between cities and villages. Third, how the income of agriculture will be distributed among its branches, regions and types of farms. This depends upon the prices of various agricultural products, upon zonal differentiation of prices, and the structure of prices.

The procurement prices do not coincide with the value of the product procured: in the Soviet Union through the system of prices and the turnover tax a part of the net income of industry and agriculture is going into the state budget from which these means are spent on financing national needs. The USSR state budget for 1958 foresees receipts from the turnover tax of 301.5 billion rubles and from profits of 130.3 billion rubles while financing of the national economy will take 257.2 billion rubles and of social cultural measures 212.8 billion rubles. Thus the procurement prices are extremely important for the distribution of the national income created by the kolkhoz members.

The prices paid should cover socially necessary expenditures. They should encourage the reduction of costs, should include necessary accumulations, and differ by zones. The costs of the products on the state farms should be taken into consideration. Zonal prices should stimulate proper specialization and geographic distribution of the culture.

A single price for products purchased by the state will result in equal payments per unit of the product to each collective farm. This system will be especially helpful to the economically weak collective farms as a result of which their resources for the expansion of production and raising the pay per labor day will be increased (formerly too much was going to the rich collective farms for deliveries above the plan at high prices). The new prices will change the rentability of various branches of agriculture, will increase incomes of those branches which were formerly neglected and will be stable under normal conditions; though they will be lower in years of high yields, they will not play havoc with the planned income of the collective farms, while in years of low yields they will help farmers to overcome their difficulties and to continue their production. The new system of prices will create favorable conditions for the application of cost accounting and control and this will contribute to the further increase in labor productivity and will strengthen the Soviet monetary system. The multiple system of prices also required too large a personnel in the financial-banking system.

N. Galperin

IMPROVEMENT OF MATERIAL-TECHNICAL SUPPLY AND THE STRUGGLE WITH SECTIONALIST TENDENCIES

The new procedure of planning opens great possibilities for local initiative in the preparation of plans, mobilization of inner resources and utilization of the experience of the best concerns. In the plans for material-technical supply the balances will be given for 700 to 800 important materials, equipment, consumption goods, etc. The USSR State Planning Commission will prepare an annual plan for inter-republican deliveries of a limited number of products in short supply and for goods which are widely needed but are produced only in a few union republics. Production of all other goods, including those of local importance, will be planned by republics (3,000 to 3,200 kinds of products). Supplies of local importance will be planned by economic councils.

Expenditures on materials amount approximately to 70% of expenses of production. In view of this, economizing on them and ensuring their proper distribution and use are of great importance for the national economy.

As early as 1918 Lenin pointed out that when power is in the hands of the working people, everything depends upon discipline and organization. One of the causes of the great victories of our country and of the continuous, uninterrupted march forward is the fact that the Party trained the Soviet people in the spirit of strict obedience to the interests of the whole society and the organized way of solving economic-political tasks.

However some organizations and workers place local interests above national interests and do not fulfill plans for cooperative deliveries. Precise and timely fulfillment of plans for such deliveries should be the first duty of the economic councils, concerns and public organizations.

In order to ensure the fulfillment of such obligations we have to avoid excessive specialization; we should avoid situations when the same city receives goods from other regions and at the same time sends the same goods to others. The first steps in that direction have been made. Gorky Economic Council was "importing" ferrous metals and at the same time "exporting" them; through improvements in this field, now the transportation of 150,000 tons of metal is avoided. Moscow City Council concentrated production of pumps in four plants (instead of eight) and increased production by 17%. Vladimir was getting glass from Dnepropetrovsk; now it obtains glass from Gus Khrustalny, nearby, without detriment to the basic line of production there, etc., etc.

The government took measures to end the non-fulfillment of interregional deliveries. The economic plan of a plant is considered unfulfilled if cooperative deliveries foreseen by the plan are not fulfilled and no bonus will be paid for carrying out the plan.

The new forms of management make it possible to carry out a radical reconstruction of the apparatus of material-technical supply and marketing on the territorial principle. The reorganization of the supply-marketing offices and bases should be made through the creation in the economic councils of an inexpensive elastic operative apparatus. This will result in lowering expenditures in this field. Expenditures of marketing organizations in 1958 amounted to 21 billion rubles and their administrative-technical expenditures to more than 800 million rubles. Tens of billions of rubles are spent on transportation. In view of this the reorganization of material-technical supply will produce a great economic effect. The improvement of production and transportation connections, for example, would save billions of rubles. Enormous reserves for the expansion of production can be found in the better utilization of the available material resources. For example, the total value of goods which were kept in warehouses above the planned amounts on October 1, 1957, reached 14 billion rubles.

V. Stolpnik

INCREASING THE SCALE AND CONCENTRATION OF PRODUCTION ON THE STATE FARMS

In the solution of the tasks standing before Soviet agriculture (an increase of grain production to 11 billion poods and catching up with the USA in per capita production of meat, milk and butter) an important role belongs to the state farms (in 1956 they cultivated 25% of the sown area of the country). The size of the state farms when they were organized was too large in view of the absence of machines, the small number of specialists, etc. But this is a thing of the past. We now have experienced personnel and sizeable capital. In 1946-1950 capital investments in the state farms amounted to 4.2 billion rubles, in 1951-1955 to 15.7 billion rubles, in 1956-1957 to 14.9 billion rubles.

The available data show that the cost in labor and money per centner of grain and other products is considerably smaller on the large state farms than on the small ones. Ten years ago, for example, the production of eggs per worker amounted to 80,000 a year; now to 250,000 and on some farms to as much as 700,000 eggs per worker. Capita investment in a small chicken coop amounts to 75 to 80 rubles per chicken; for big farms 13 to 15 rubles per chicken. The same is true for hogs, cows.

Some specialists think that every state farm should have almost all branches of production. This is wrong. It is not specialization which is harmful, but an excessive specialization which does not allow the full utilization of all land and human resources of the state farms. Among the branches of agriculture each state farm should select those which are most advantageous.

The average size of the state farms in Central Russia is about 3,000 ha of land; but in the Omsk region we have very successful state farms with a sown area of 22,000 ha. For the successful work of such a state farm it is advisable to bring workers to the central farmstead, where we have all modern conveniences. Then the workers would not leave their jobs as frequently as they do now. On some farms the managers try to solve the problem through building cultural facilities and public utilities at every subfarm. But this is too expensive and just the same cannot supply the workers with the same conveniences as at the center. On small and average state farms the director may manage the whole farm from the center: there is no need for subfarms and small branches. Only on the state farms where great expanses are used for pastures too great a concentration is not advisable. Given concentration, expenditures for construction, electrification, water supply etc. are 20 to 40% less than in the case of dispersion.

Of course, if there are many buildings and equipment on subfarms, concentration should not be arranged at once: it may be spread over a number of years (five to ten or even longer); yet this goal will help to prepare good long-term plans of construction. In many cases it is possible even now to abolish subfarms and branches as independent administrative units, without bringing men to the center.

I. Dvorkin

CLASS STRUCTURE OF CONTEMPORARY CAPITALISM IN THE DISTORTING MIRROR OF REFORMISM

The most important difference between Marxism-Leninism and reformism is the problem of classes and class struggle. Lenin wrote "The question of the class struggle s the basic question of Marxism." Reformists criticize the Marxist theory of class struggle and dictatorship of the proletariat in order to preserve the domination of the bourgeoisie. They deny the existence of classes in the bourgeois state. Fritz Klenner, for example, in Austria informed the workers that they are facing a public employer and not capitalists. Why? Because 26.2% of employees work in a "public sector" and the public capital investments make up half of the total capital investments!

Another reformist, Siegfrid Landshut, insists that there are no classes in the capitalist countries. The concept of classes has been overcome! Profits? The directors of concerns are just like workers, listen to the same radio program, attend the same football matches, etc. Everyone has become a proletarian! G. Weisser speaks of "exploitation of consumers." Workers and capitalists find themselves in the same group and are confronted by consumers! Labor and capital for him are "factors of production and not groups of persons."

S. Landshut connects the disappearance of class contradictions in bourgeois society with the results of the two world wars and the loss of position of capitalists through inflation. Kluth asserts that 90% of the population of the USA belongs to the middle class. Schmidt estimates that only 10% of the population of West Germany are proletarians, forgetting that beside workers the proletariat includes clerks, engineers, technicians, trade workers, bank and insurance employees.

The statistical data for the USA show that in fifty years (1900-1950) the part of the industrial proletariat (those occupied in industry, mining and construction) increased from 30.3% of the employed persons to 33.9% and if we include railroad transport and public utilities—from 36.1% to 41.8%. The share of those occupied in circulation (banks, insurance, trade) increased from 11.7 to 22.3%. Similar data are available for Western Germany where between 1882 and 1950 the share of the self-employed was reduced from 25.4% to 15.4% and of the workers and other employees increased from 64.7 to 71.6%. These figures show how false in that respect are the statements by Landshut and Kluth.

The opponents of the class struggle try to replace the Marxist-Leninist theory of the class struggle with professional and group differences. If there is no proletariat, but only a sum of professions, if there is no capitalist class, but only various layers and groups, then there is no need to carry on a class struggle. Yet at the same time those very writers who do not notice classes in the capitalist countries discover a "new bourgeoisie" in the Soviet Union!

Some reformists (Renner, Sehring, Stammer) accept the bourgeois theory of an elite: instead of classes there are small groups of select people who carry on their struggle for power. This "politically and socially priveleged minority" stands over the people "as the constantly renewed upper layer of the hierarchical order." Bruno Pohl also stresses that the elite of the proletariat — officials, artists, writers — cannot be included in the scheme of the class struggle. The proletariat is being transformed into the petty bourgeoisie. Yet, as the Marxist tradition is strong among the workers, the reformists have to hide their real views. We know, for example, that there were many protests against the draft program of the Social Democratic Party in Austria.

The struggle with the right opportunists in the ranks of the Communist Party requires serious criticism of the reformist theories.

CRITICISM AND BIBLIOGRAPHY

A Discussion Concerning Textbooks of Industrial Economics

A textbook, "The Economics of Soviet Industry," prepared by a group of research workers of the Institute of Economics, USSR Academy of Sciences, was published in 1956. Another textbook "Economics of Socialist Industry" prepared by a group of Moscow University teachers (and others) was published in 1957. Both these textbooks were discussed at a conference at the beginning of 1958.

The discussion showed that there is no need to examine separately the raw material base and the fuel and power base of industry. "The Economics of Socialist Industry" failed to present a special chapter on cost control and self-finance and on the question of economic effectiveness of capital investments (those which serve the purpose of expansion of production and those which are used for applying new technique). The concensus of opinion was that the history of the development of socialist industry is superfluous in these textbooks because this question is treated in a special course. Chapters on the organization of industry are weak in both textbooks. Lenin's principle of democratic centralism is not sufficiently shown, as well as the necessity of a struggle with sectionalism and the narrow departmental approach. "The Economics of Soviet Industry" failed to treat properly the branch structure of industry.

The scientific level of the textbooks should be raised. Their terminology is weak. "The Economics of Socialist Industry" defines technology as "methods with the help of which the production and processing of the various objects of labor is carried out," while it would be better to say that technology is "a sum of knowledge concerning the methods and means of obtaining raw materials and their processing into the necessary goods." Similar terms are defined differently in the same textbook. "The Economics of Soviet Industry" treats capital works, capital investments, and capital expenditures as synonyms. The term "accumulation" is used as a synonym of profit and as a synonym of profit plus the turnover tax. Some members of the conference suggested distinguishing between cost and expenses of production. Expenses of production are expenditures on means of production consumed in the process of production and on wages expressed in money form. Cost is expense of production per unit of product.

It was also pointed out that in "The Economics of Socialist Industry" rentability is considered as equal to profit obtained by a given concern, while actually rentability is the whole net income created by the concern independent of its division into profit and the turnover tax. Frequently a profitless concern ensures the state a large income in the form of the turnover tax through other branches of the economy.

Both textbooks poorly reflect the practice of socialist industry and the experience of the best concerns. Changes in connection with the reorganization of management are shown superficially. As a rule methods used to solve concrete problems are not demonstrated. The theoretical level of chapters on technical progress is relatively low.

The statements of the conference participants show that further work is necessary in order to improve the quality of these textbooks. The textbooks should be carefully edited in order to avoid weak formulations, wrong recommendations, actual mistakes. The authors of these textbooks should consider the comradely criticism and continue the work of improvement.

Y. Kvasha

The Necessity for Detailed Discussion of How to Calculate Optimal Variants in Industrial Economic Textbooks

The idea of an optimal variant (the best decision which achieves maximal reduction of expenses of production) has not been developed in the textbooks Economics of Soviet Industry, and Economics of Socialist Industry. Speaking of the effectiveness of capital investments they say: "It is measured by the growth of productivity of social labor and the reduction of cost." It is "measured to a considerable degree by the time factor. Gaining of time in construction is of great importance for the national economy." (Economics of Soviet Industry) But how should one measure it? How should its effectiveness be calculated? How should the best variant from the economic point of view be selected? No answer.

Of course, to discuss such problems in a textbook is not easy. Yet the methods should be demonstrated. The Economics of Socialist Industry gives a formula showing how to calculate a period during which the additional capital investments pay for themselves (generally in four years) and then states: "Other conditions being equal this variant of reconstruction...may happen to be more effective economically." But what are these "other conditions being equal"? The period of reconstruction? The period of mastering the new technique? Capital investments in an adjacent sector?

The Economics of Soviet Industry states that piecework may be introduced for the majority of workers. Yet if workers' performance is determined by a conveyer; or the line is fully automatic; or they work with chemical apparatuses — would not a bonus system bring better results than the piecework in these cases? Thus the form of wages should depend upon the type of the technique and the organization of production. A certain form of payments useful under some conditions is not suitable under others.

Another problem not touched upon was the case in which improvement in labor productivity is bought at the cost of a loss in the productivity of machines (or vice versa). A worker who watched one machine tool now manages several of them. His productivity is greatly increased, but that of the machines is reduced somewhat. Later a number of organizational-technical measures may raise it above the former level. Yet in our decisions we have to be able to make economically comparative measurements. Or consider the extraction of metals. We should try to extract 100% of the metals from the ores. But this is too expensive. Where should we stop? We must find a point of optimal returns. Again, The Economics of Socialist Industry states capital repairs help expanded reproduction of the basic funds. But not every capital repair is helpful. We have to find its economic limits, etc., etc.

In both textbooks not one equation is given, not one Nomogram. Why then are students taught higher mathematics when even elementary algebra is a dead weight for them?

Quantitative analysis is needed also in investigations of the general laws of socialist industrial development, ties of socialist industry with other branches of the national economy and in determining interindustrial and interbranch proportions and for annual reports and documents. They should explain the contents of the most important measuring devices and indices used in planning; show the defects of indices; show whether they stimulate production in the proper direction. The dynamics of gross production and labor productivity are measured by an index of gross production at comparable prices. Yet we know very well that this leads to changes in the assortment of the products and unjustified increase in the production of the so-called profitable goods.

In future editions of these textbooks the authors should pay more attention to methods of quantitative analysis.

M. Kalganov

From the History of Russian Economic Thought at the Time of the Abolition of Serfdom

[Review of N. A. Tsagolov's Essays in Russian Economic Thought at the Time of the Abolition of Serfdom, 1956, 464 pp.]

Actually the contents of this book are narrower than the title: the author discusses the relation of various groups to one question only — the question of the abolition of serfdom. Russia of 1850 and 1860 was a feudal agrarian country with substantial foreign trade. Her interests as a great power led her to rivalry with the western states; but while the western nations were developing new techniques and increasing labor productivity, in Russia the exploitation of the serfs was intensified.

I. Ivanyukov and V. Stein thought that at the time of the abolition of serfdom the central problem was that of the Russian commune. The author correctly shows that the central question was that of the land — should it remain in the hands of landlords or be given to the peasants? Ladyzhensky, Blank, Bezobrazov and Golitsyn were in general against the abolition of serfdom. But such conservatives were few. The majority were "hidden" partisans of serfdom who preached gradualism in reform, and demanded large payments by the peasants which would compensate the landlords for everything. Slavophiles spoke of their love of peasants, but in the struggle of that period they defended the landlords' economy and stood for robbing and expropriating peasants. Freedom with land, but on condition of payments. Samarin and Koshelev spoke of payments only for the land, not for the peasants themselves but actually they determined the amount of payments throug the capitalization of the quitrent. The Slavophiles also want to preserve the commune which would strengthen the landlords' regime and autocracy.

B. Chicherin was a frank defender of the landlords' road of bourgeois development — payments for the land, no commune, but transformation of the peasant economy into an appendix of the landlords' estates. K. Kavelin was against the reduction of peasant allotments, but thought that their payments should compensate the landlords for the land and for the loss of the serfs. D. Strukov and I. Vernadsky represented the position of the liberal Russian bourgeoisie. N. Chernyshevsky, the ideologist of the revolutionary peasantry, advocated complete liquidation of the landlords' landed property and its transfer to the peasants without any compensation.

Speaking generally this is a good work, though there are some defects, contradictions and omissions. Gorlov and Babst are not mentioned. There is no special chapter on Chernyshevsky and other revolutionary democrats. In one place the author asserts that feudal relations could not change into capitalist ones; in another — that the relations of the feudal type in the post-reform period had a tendency

be transformed into capitalist relations. He also thinks
at nationalization of the land during the period of transi-
on from feudalism to capitalism is a revolutionary meas-
e. But such property cannot exist for long. The experi-
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REVIEWS

K. Mikulsky

Industrial Management Improvement in the German Democratic Republic

At the beginning of the First Five-Year Plan the industrial management system in the Republic was as follows. Under corresponding ministries and their departments there were associations of the people's concerns which were independent economic units while individual concerns did not have economic-operative independence. This system was the result of the difficulties experienced at that time: the division of Germany in two, breaking of the established ties between them, shortage of raw materials and fuel, inexperience of the management, the necessity of strict control over production and distribution in view of the violent resistance of the capitalist elements to the economic measures undertaken by the people's power.

But since 1950 various changes were introduced and finally on February 11, 1958, a law was passed on the "improvement and simplification of the work of the state apparatus." Planning and management of the whole economy is now in the hands of the State Planning Commission. A number of ministries were abolished and the structure of those which have remained has been simplified. The concerns remaining subordinated to the central organs are united into 75 associations which manage 1,658 concerns. Such associations are found in the main center where their concerns are concentrated. For example, 50% of metal and rolling equipment for the cement mills is in Magdeburg. So the association in charge of these machines is in that city.

The role of the districts in management has been greatly increased. In each district there is an economic council which is at the same time a local organ and an organ of the State Planning Commission planning the development of the district and having control over the fulfillment of the plan. Under such councils there are 600 concerns and a number of trading organizations. After reorganization 40% of the industrial production and 90% of the construction work is under local economic councils.

Great attention is paid to the unity and dove-tailing of the various parts of the plan. Beside plans of the development of the national economy for each district the State Planning Commission also works out a plan of material-technical supply.

This reform is not just a reorganization of the structure; it is the beginning of the political-educational and economic-organizational work of the economic organs. The role of the labor unions will be greatly increased; their members will be represented in the State Planning Commission and other organs.

As a result of these improvements many concerns raised the goals established by the plan.

NOTES AND COMMUNICATIONS

G. Safrai

There Are Great Possibilities for Reducing the Cost of Repair of Agricultural Machines

The effectiveness of repair work may be greatly increased through restoration of details and units of the machines. This will reduce the cost of repair and will reduce the need for spare parts which are frequently in short supply. Poor supply of spare parts is the basic cause of low quality of repairs, of nonfulfillment of the plans by volume of work and of prolonging repairs. Frequently it lowers the coefficient of changeability (a ratio of the changed details of a machine to the total number of details), results in making spare parts from various unsuited materials by hand, etc.

Specialization in the repair work at the RTS and the use of the latest technique will greatly increase the variety of the details and units which can be restored at the RTS.

However, the existing system of control over the execution of the plan stands in the way of such improvement. According to the instructions of the USSR CSA (March 1, 1956) the cost of the restored details and spare parts is not included in the gross production. Under such conditions an overfulfillment of the plan of restorative repairs results in an overexpenditure of the wage fund, because it is plan on the basis of gross production. Thus the expenditures restoring details above the plan have no source from whi they can be covered.

Yet the restoration of worn-out details and their use in repairs is the most important source for lowering the co of repair of agricultural machines, tractors, and trucks. As a rule the restored details and units are 30 to 50% cheaper than the new details and units. The possibilities of increasing the volume of such work are very great. It is well known that the wear and tear of the main mass of details of trucks (of more than 90% of them) is insignifica and they could be easily restored through building up of the metal, chrome plating, metallization, etc. Through su operations the resistance of the details to wear and tear frequently is increased.

Changes in the existing system of control over the fulfillment of the plan of gross production is of great practi importance for spreading the best methods of repairing agricultural machines.

SCIENTIFIC LIFE

The All-Union Conference on the Problem of Effectivenes of Capital Investments

In June 1958 the All-Union Scientific-Technical Conference on the problems of defining the effectiveness of capi investments and on new technique in the national economy of the USSR was organized in Moscow by the Institute of Economics, USSR Academy of Sciences. About 800 specialists took part in the conference. They discussed the main question of the effectiveness of capital investments, the effectiveness of the application of the new technique and of advanced technology in various branches of indust and construction, as well as some questions connected with price formation, the use of the system of value lever in the practice of economic construction at the present stage of economic development of the USSR and the question raised by the decisions of the May (1958) plenum of the CC, CPSU.

A number of papers were discussed in the sections of light and food industries, construction and railroad tra port. About 150 specialists took part in the discussions. The Conference discussed and then approved a draft reso lution of recommendations on the problem of how to defin the economic effectiveness of capital investments and of new technique in the national economy of the USSR.

Among the reports made were those by T. S. Khachatu (Economic effectiveness of capital investments in the US national economy), G. D. Bakulev (Main criteria and indices), A. I. Schuster (Main problems of the methods use to determine economic effectiveness of machines of new design), K. I. Klimenko (How to determine the economic effectiveness of complex mechanization and automation i machine building), G. G. Bugaev (Basic methodological problems of determining the economic effectiveness of the new technological processes), A. G. Basistov (Applica tion of the "Provisional standard methods for determinin the effectiveness of new technique"), L. A. Vaag (Genera questions of evaluating the effectiveness of capital invest ments), V. V. Novozhilov (Laws and methods of measurin xpenditures and results in the socialist economy as a basis r determining the economic effectiveness of new tech-que), L. B. Kantorovich (Modern mathematical methods sed in determining the economic effectiveness of capital vestments), S. A. Dumler (Economic evaluation of the nprovement of technique illustrated by examples from ma-nine building), H. S. Ferberg (The practice of using tech-cal and economic indices for determining the effectiveness capital investments), S. G. Strumilin (Economic effective-ss of new technique).

A number of papers were also read at the meetings of the ranch sections.

roblems of the History of the USSR National Economy and e Principles of Its Division into Periods.

In April, 1958, the Learned Council on the History of the ational Economy and Economic Thought (Institute of conomics, USSR Academy of Sciences) discussed the uestion serving as the title of this article. The main re-ort was made by I. A. Gladkov. Below is given a summary 'this report and additions made as a result of the dis-ussion.

The history of Soviet economics is based on the science economic history as a whole. This science studies the story of the national economy of some particular country all its variety at the various stages in the development society, showing the concrete forms of economic laws of vari-is social economic formations. The history of the USSR na-onal economy studies the emergence and development of the ocialist economy. Its purpose is to characterize scientifically e socialist system of economy by stages of its historical de-elopment, to throw light on the process and conditions of its nergence and to show the development of the new economy.

The Soviet economy has been created by the working ass in alliance with the peasantry and is guided by the P and the Soviet state on a planned basis. The history the USSR national economy, among its objectives, should dicate the scientific basis of the economic policy at each age of socialist construction. It must show how socialist roduction relations ensure the uninterrupted growth of e productive forces, the continuous growth and improve-ent of social production. It must show how socialist in-ustrialization was prepared and carried out. It traces the dical changes in the territorial distribution of industry, id liquidation of the economic inequality of peoples. It so has to throw light on external economic connections: ade with the capitalist countries during the period of pitalist encirclement and under the new conditions when world socialist system has emerged. This science also is to show the advantages of the socialist system of econ-my over the capitalist system.

On the basis of principles of the scientific periodization e following stages were recommended to describe the riod of transition from capitalism to socialism:

1. Victory of the Great October Revolution and the be-nning of the socialist transformation of the people's conomy (November 1917-June 1918).
2. The Soviet economy during the period of foreign in-rvention and Civil War (1918-1920).
3. Restoration of the national economy (1921-1926).
4. Building of the economic basis of socialism (1926-932).
5. The completion of the reconstruction of the national conomy, the victory of socialism in the USSR (1933-1937).

The history of the USSR national economy during the riod of socialism and the gradual transition from socialism to communism may be divided into the following periods:

1. Development of the socialist national economy in the pre-war years of the Third Five-Year Plan (1938-1941).
2. The socialist economy in the Great Patriotic War (1941-1945).
3. Restoration and upsurge of the national economy in the postwar period (1946-1955).
4. The national economy at the present stage of building communism (after the 20th Congress of the CPSU).

Scientific Session on the Study and Generalization of the Experience of the Economic Councils

In May, 1958, a scientific session for the study and generalization of the experience of the economic councils took place at the Chair of Political Economy, Academy of Social Sciences. I. I. Kuzmin who opened the session emphasized that the formation of the economic councils resulted in the acceleration of the growth of productivity of social labor, and in the increase of production in all branches. But in such a short time not all of the tremendous advantages of the new system could appear. The economic development of the USSR will greatly accelerate as a result of this measure.

V. I. Lebedev emphasized that the new organization makes it possible to interconnect better the development of various branches of the economy. He criticized the existing regulations concerning the enterprise funds. Such funds are frequently spent independently of results and as a kind of assistance to individuals. He suggested that there should be a single source of bonuses for the workers, engineers, and technicians. He doubted the wisdom of using half of the funds for the needs of production.

A. N. Grzhegorzhevsky spoke of raising the technical level of production under the new conditions. The newly created organs (technical administrations) have as their function the systematic raising of the technical level of production. In addition many research institutions were founded. The application of new technique should lead in all cases to the improvement of conditions of labor, which was not the case in the past.

V. I. Gromov reported on the development of specialization and cooperation in the concerns of the Leningrad economic region.

V. V. Kondakov criticized the existence of poorly organized concerns with high costs under local Soviets. All concerns of the same type should be either under the economic councils or under the local Soviets. The State Planning Commission should keep the economic councils informed about the costs at the best, average, and worst concerns.

O. F. Gubareva showed that the plans for training specialists have great defects. There is a shortage of engineers in the rapidly expanding branches of production. Higher institutions do not prepare enough specialists with broad training and production experience.

G. Evstafyev showed that under the new conditions there is great scope for the development of local initiative and for intensifying socialist competition for lowering unit cost.

A. G. Kulikov criticized those who suggest ending losses of some concerns through raising wholesale prices of the means of production. This is not the solution because the differences in costs among the concerns are too great. He advised applying a system of zonal prices. In respect to labor and wages he advised preserving only one index — the wage fund.

P. A. Khromov showed that more developed economic regions obtained better results in specialization and cooperation and emphasized that complex development and autarchy have nothing in common. Autarchy denies specialization of the economy, while complex development presupposes it.

L. P. Lykova showed that there are great possibilities for increasing production capacity by the renovation of equipment and application of new technique.

R. I. Levin spoke of the necessity of forming large economic zones embracing several economic regions for certain purposes. For example, the Baltic republics; in other respects, the Baltic republics and the Leningrad region, etc.

L. Brutus and A. Raud

The Conference of the Institutions of Higher Learning and of the Institute of Economics, Estonian Academy of Sciences

At this conference a number of papers were read and discussed.

A. Keern showed the state of the Estonian economy during World War I. P. Ozerve analyzed the economic situation in Latvia in 1917-1919.

O. Sepre in his paper, "the imaginary agricultural prosperity in bourgeois Estonia," showed that the sown area of Estonia in 1937 exceeded the 1913 level only by 5%. In a period of 20 years the gross production of grain increased only by 35%, of feed and potatoes by 15% and some growth of cattle was accompanied by a reduction in the number of sheep and pigs.

E. Brandt showed that between 1945 and 1948 Estonia obtained 1.1 billion rubles more products from other republics in the USSR than it sent to them, that in 1956 it sent to other republics three billion rubles worth of goods and received 3.3 billion rubles worth of goods and that the living standard of the population is rising constantly.

Several papers dealt with economic theory.

L. Starodubsky showed how the liquidation of ministries and the departmental system in the Latvian Republic and the creation of an operational center for decisions in Riga strengthened production ties inside the Latvian Republic, put an end to irrational haulage and made it possible to find new production reserves.

V. Tarmisto showed that in the rate of industrial growth, in per capita investments into industry and in the increase of labor productivity in agriculture, Estonia occupies first place among the Baltic republics.

Recently several statistical handbooks were published in Estonia; but published materials still are not sufficient for the needs of the economists.

N. Veduta

The Belorussian Economic Council and the Institute of Economics, Belorussian Academy of Sciences

The organization of the Economic Council of the Belorussian Republic helped to put an end to the dispersion of the same kinds of production which was brought about by the existence of so many ministries and departments. For example, the cutting of peat in 1956 was done by ten different ministries; in 1957 84% was cut by the concerns of the Economic Council and 16% by local industry.

Many questions are now solved by the Economic Council together with the Institute of Economics. The Institute is now occupied with problems of peat cost, foundries, and problems of economic stimuli in socialist production. Th existing system of bonuses has many defects and does not help the growth of production initiative and the active use of all inner reserves. The size of the bonuses for engine and technicians depends upon the branch of production an the size of the concern but not upon the volume of production. As a result concerns with a smaller rate of growth frequently pay larger bonuses.

Though there are certain achievements in the work of the Economic Council, there are also serious defects. On of them is the lag in the organization of material-technic supplies and cooperation among concerns to meet the demands of the national economy. The scientists of the repu can render great help to industry through the generalizat of the experience of the Economic Council. Yet the proble connected with the work of industry under the new conditi are almost completely absent from the program of the Institute. Only the Polytechnical Institute has the theme "Organization of material supply of the economy of Belorussia under the new system of management" in its plan.

I. Gudoshnikov

Scientific Work in the Economic Department, Voronezh Agricultural Institute

The scientific work in the economic department of the Voronezh Agricultural Institute is going on mainly in the fields which are of great importance for the national economy and for the workers in the field. Among the themes being studied are: "state farms in the system of the socialist agriculture;" "economic effectiveness of complex mechanization on the state farms;" "repair of machines on the state farms;" "special features of cost accounting on the state farms;" etc. In one of the published works of a member of the Institute it was shown that the time of machine operators was not fully used by the MTS: in the summer it was used only 50% and in winter only 25 to 40%. He showed that the collective farms will now be able to utilize their work more fully.

Other studies were on the "economics of sugar beet production in the Central Black Earth Region" and "the economic problems of the collective farms in the Vorone region." A large group of scientific personnel were work in the field helping to raise the production of meat to 100 centners and of milk to 400 centners per 100 ha of agricultural land on the collective farms. They also helped to improve the organization of production, the cultivation of corn on the basis of complex mechanization, etc.

B. Kazansky

Research Institute of Construction Economics

This institute was organized in 1957 at the USSR Acade of Construction and Architecture. Its function is to study problems of construction economics as well as importan economic problems connected with designing, estimates, the organization of the production-technical base of construction and the production of building materials. It als coordinates scientific work in the field of construction economics carried on by other organizations and institut In 1957 its staff completed a study entitled "the development and geographic distribution of the construction indu try and improvement of its organizational forms." It worked out principles for strengthening the production-chnical base of construction under new conditions and a stem of technical-economic indices per million rubles of nstruction-assembly work. This formed a basis for the Basic rules for determining the perspective plan of de- lopment and geographic distribution of the production- chnical bases of construction in the economic-adminis- ative regions." These rules were applied in practical cisions concerning the Tartar, Kustanai, Irkutsk and her regions.

Another problem, "improvement of the system of planning construction," has not yet been completed. The staff of e Institute helps to prepare the new price lists per sq. t. of floor for various cities and regions of the country d has prepared a directive for the calculation of indices be used in revaluation of the basic funds. It also pre- red suggestions for the improvement of methods used determine the cost of construction in the estimates and structions for the revaluation of the economic effective- ss of the variants of designs.

The first year of existence of the Institute also revealed ome defects in its work: the too narrow, departmental, actical character of the papers. Too much attention in 958 is being paid to technical-economic investigations d too little to such problems as the development and lo- ation of the construction industry, the improvement of the rganizational forms of management and the improvement the economic side of the construction. The theme abor productivity in construction" was not studied at all. e believe that the main task of the Institute is the working t of the scientific principles of construction economics their application to construction management within the amework of the basic laws of the socialist economy, and so a careful study of the laws and categories of construc- on economics. Up to now the basic question — what is the oduct of construction? — remains unanswered. Attention s been directed toward the fulfillment of the plan in terms money. Quality in the entire cycle of construction and the completion of construction on time were replaced with "profitable and expensive work" which would help to fulfill the plan in terms of money.

The difficulties of the scientific work in this field are intensified by the absence of generally accepted terminology. Such terms as "the product of construction," "industrialization of construction," "construction industry," "a concern of the construction industry," "incompleted construction," "the volume of construction work," are understood and interpreted differently. Such categories as value and cost are mixed up. There is a danger that this institute will become only a subordinate organ of the Department of Economics of the USSR State Construction Commission and will not be able to carry out its theoretical work, which is of tremendous importance for practice.

INTERNATIONAL SCIENTIFIC TIES OF THE ECONOMISTS

Delegation of the French Economists in the USSR

Eleven well-known French economists, at the invitation of the USSR Academy of Sciences, were in the USSR from May 11 to June 1, 1958. They visited Moscow, Kiev, Tbilisi, and Leningrad, acquainted themselves with the structure, role, and functions of the State Planning Commission, and with the methods of current and long-range planning. They were especially interested in the methods of preparing material and value balances, the planning of capital investments and the organization of training of future economists in the USSR. They wanted to know the length of training, types of economic specialization, etc. and discussed a number of theoretical problems.

They also visited a number of industrial concerns and economic councils.

EZENTSEV (Continued from Page 23)

ery ruble, spent on toxic chemicals, saves 5-10 rubles the crop of grains, beets, vegetables, 15-30 rubles on chnical crops and berries, 40-70 rubles on citruses. The emical industry provides agriculture with fertilizers, emical agents for destroying weeds, new substances pable of regulating the development of plants and fodder d sanitary means for stock-breeding.

The total economic effect of the utilization of chemical oducts in the national economy amounts to many billions rubles annually.

The grandiose program of accelerated development of the chemical industry adopted by the May Plenum of the CC of the CPSU received the unanimous support and warm approval of the Soviet people. The fulfillment of this program will be an important contribution for solving the main economic task of the USSR — to overtake and surpass in the shortest time the most developed capitalist countries in per capita production — and for the construction of communism in our country.

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YACHENKO (Continued from Page 92)

t the high rate of industrial development in the USSR was sed on the use of slave labor and exploitation of the subju- ted countries and so will not continue for long, while in the A the economy is being developed in the interests of the pulation and the national income is distributed more and re equally, etc. The economists of the socialist coun- es refuted his statements and showed that the USSR's help is an important factor for economic growth in the countries of people's democracy. On the other hand they showed the preservation of slave labor in the United States (the Negro question), the growth of unemployment, and the exploitation of other countries by American monopolies.

Prof. Saul (Turkey) and the Turkish authorities greatly contributed to the successful work of the conference.

AUGUST

P. Figurnov

THE WORLD SYSTEM OF SOCIALISM IN A NEW UPSURGE

Since the October Revolution the world split into two systems — capitalism and socialism, each developing according to its own laws. While the sharpest contradiction on the international scene is that between the socialist camp and the imperialist aggressive block, the capitalist system is being split further by irreconcilable contradictions. The socialist camp and the peace-loving non-socialist countries now form a great "zone of peace" with a population 1.7 billion. It would be a mistake to consider the whole capitalist world as a united military-political camp.

The socialist system is united and monolithic. Its countries are equal and sovereign and there is no exploitation among them. Unlike the affirmations of the Yugoslav Union of Communists who look upon the camp of the socialist countries in the same light as they do upon the imperialist bloc, the countries of the socialist camp apply all efforts to achieve peaceful coexistence and to liquidate military blocs.

The construction of socialism and communism under present conditions cannot go on in isolation. Each socialist country has to rely upon the economic power and the political unity of the whole socialist camp. That is why all Communist Parties condemned the revisionist program of the Yugoslav Union of Communists.

In the economic competition of two systems socialism achieved great successes in a short historical period. Before the war it made up 17% of the world territory, 9% of the population and 7% of the industrial production. Now it consists of 26% of the territory and about a billion people (more than one-third of the world population); it has half of the known iron ore reserves, more than half the bauxites, more than 60% of the coal, 75% of the potassium salts, 90% of the manganese, etc. Its part in world industrial production reached 30%; 38% of the coal, 25% of the pig iron and steel, 20% of the power and cement, and more than 30% of the cotton fabrics and cotton.

Its industry is being developed at a rate impossible for the capitalist countries. The level of its industrial production amounted to 867% of the 1937 level, while the production of the capitalist countries amounted to 202% of the 1937 level.

Especially great are the achievements of the Soviet Union which in industrial production occupies second place in the world (20% of world production), with an average annual production growth of 16% as compared with less than 3% in the United States. The production levels planned for 1972 will exceed US production in 1957. Already in 1957, its production of milk is equal to 95% of the US production, of butter — larger than the US production; it produces more than twice as much wheat, more than three times the sugar beets and 2.5 times more wool than the US. Other socialist countries also show very rapid growth in production. As early as 1962 China, in her level of industrial production, will catch up with Japan and France. Czechoslovakia is ahead of Sweden and France in the per capita production of steel and of France and Japan in the per capita production of power.

The growing division of social labor among the socialist countries makes it possible to increase labor productivity and to lower costs. Yet the socialist countries would like to expand economic, technical and cultural collaboration between the two systems. The US with its policy of discrimination against the socialist countries harms first of all itself. Socialist countries have established a very useful collaboration with the underdeveloped countries of the capitalist world on the basis of full equality and unselfish help. This is a new type of collaboration among the peopl determined by the very nature of the socialist countries t which exploitation and oppression of other peoples are alien. The existence of the world system of socialism helps the national renascence of the economically underdeveloped countries. The countries of the world socialist camp will continue their efforts for expansion of such collaboration among all countries of the world irrespective of their social and political regimes.

A. Bolgov

THE POLICY OF STRENGTHENING THE ALLIANCE O THE WORKING CLASS WITH THE PEASANTS AND TH NEW STAGE IN THE DEVELOPMENT OF THE KOLKHOZ REGIME

Marx and Engels taught that after the victory of the socialist revolution the working peasants will immediately experience an improvement in their position. The government, wrote Marx, will bring peasants to the side of the revolution and take measures which will make easier the transition from private property in land to collective property. Lenin defended Marx's teachings against revisionists and developed them further. Under his guidanc after the revolution the survivals of serfdom and peasant indebtedness were abolished and the nationalized land given free for its utilization. The impoverishment of the peasant class, characteristic of capitalism, was ended. T small individual peasant farms, unable to maintain even simple reproduction, were collectivized. This ended the division of the peasants into poor and rich and freed them from exploitation. During the rigorous test of the last wa the working class and the kolkhoz farmers united around the Communist Party and ensured victory and, after the war, a rapid restoration and development of the national economy.

Beginning with 1953 the Party and the government carried out many measures for the improvement of agriculture, the last of which (February and June, 1958) were directed at the strengthening and development of the kolkho regime. Machines were transferred to the collective far compulsory procurement of products was abolished and single purchase prices for agricultural products were introduced, differentiated by regions and zones of the country.

Up to now accumulation was undertaken chiefly by the economically strong collective farms which sold their products at high prices, utilizing the system of premium and additional payments for deliveries above the plan. T weak and average collective farms, whose production is relatively small, delivered their products under the compulsory procurement system or under contract and did n enjoy the benefits of the high prices. The new system of

ices ensures more favorable conditions for accumulation
d expanded reproduction in all collective farms. The
ices were adjusted to the average level of costs. To help
e weak collective farms, their past indebtedness to the
ate and the MTS was written off. Prices will now be
able and yet changing according to the conditions of the
ar. All this will help cost accounting. Prices for ma-
ines, fuel, fertilizers, and other industrial goods are now
e same for both the collective and the state farms. The
llective farms will be able to obtain advances (without in-
rest) in anticipation of their future sales to the state.

It is interesting to observe that the first results of 1958
siness activity support the hopes of the Party and the
vernment. In the Stavropol region the work per tractor by
e 1st of May, 1958, amounted to 214 ha of plowed land as
mpared with 167 ha in 1957; long unused lands were
ened up; by August 3, 1958, the collective and state farms
that region sold to the state 100 million poods of grain —
million poods more than required by the plan. In the
stov and Zhitomir regions sales exceeded the plan by
2%.

Measures taken by the Party for the further development
the kolkhoz regime are of international significance. In
e capitalist countries peasants continue to be impoverish-
, while our peasants improve their situation. Opportunists
d revisionists of all kinds doubt the strength of the alli-
ce of the working class and peasantry, the possibility of
e socialist development of society and its transition to a
assless society, thus joining hands with the bourgeois
ologists who deny the progressive development of society
d declare that the idea of progressive development is a
yth.

The example of the Soviet Union and of the people's de-
ocracies clearly show that "only through the guidance of
e proletariat can the mass of small cultivators be libera-
d from capitalist slavery and brought to socialism." (Len-
, Works, Vol. 32, p. 435.)

Cherepnin

UESTIONS OF PAYMENT FOR THE WORK OF THE ACHINE OPERATORS AT THE COLLECTIVE FARMS

The question of the most effective system of payments to
TS operators who now work at the collective farms is very
portant. Far from all MTS have been reorganized and the
estion of retaining machine operators in agriculture is
ry vital. They went willingly to work for the economically
rong collective farms because such farms guaranteed high
d stable earnings. Payments per labor day in 1957 in the
rong collective farms of the Moscow regions varied from
to 27 rubles per labor day and tractor drivers were
tting from 4 to 7 labor days for the actual work day, de-
nding upon the complexity of the machines. For the MTS
mbine operators the pay per unit of work was the same
roughout the USSR; but as conditions differed, their earn-
gs differed too. They harvested 12.1 ha per machine per
y in Kazakhstan in 1957 (where the weather is favorable
d the fields are large) and only 4.2 ha in Latvia, so that
e average earnings of combine operators varied from
8.8 rubles in Kazakhstan to 34.45 rubles in Estonia. The
llective farms should establish payments per ha, taking
o consideration the yields, the state of fields, the height
the plants, etc. and if a combine operator fulfilled the
ndard per day, he should have an additional payment on a
ogressive scale principle by the job, depending upon the results of the harvest. The basic payments per unit of work should be differentiated by zones.

Operators of other machines should be paid by analogy with tractor drivers. Payment to brigadiers, their assistants and controllers of the MTS were too complicated — 144 rates were in existence — and they were paid too much as compared with an average tractor driver (2.82 times more).

Some collective farms began to pay the brigadier of a tractor brigade 75 labor days per month, 65 days to his assistant, 45 days to the timekeeper, etc. But this is wrong because such payments do not depend upon the final results. We should search for a more effective system of payments to these categories of workers. One who is in charge of a tractor brigade should know more than machine operators and so his earnings should be no less than the earnings of a driver operating the most complex tractor — say, no less than 160% of the average earnings of tractor drivers, getting more as the number of tractors in the brigade increases, though hardly more than for eight tractors: otherwise the brigade becomes unwieldy.

The basic defects of the system of payments in agriculture are the same as in other branches: a multiplicity of standards which are lower than they should be, standards based on past experience and out of touch with the present level of technical development and better organization of production; a large number of various premiums, bonuses and other additional payments which undermine the importance of the basic rate of payment; differences in payments for the same kind of work to workers of approximately the same skill.

The collective farms should reexamine the MTS system of payments, make it simpler and understandable for the machine operators and make them interested in increasing yields and lowering expenditures.

Standard zonal centers, organized at some MTS and RTS, should help them in that respect. They should work out standards based on concrete conditions of the corresponding collective farms, otherwise the collective farms will try to establish the new standards not through serious scientific study, but by an experimental-statistical method. The law foresees that payments for the work of machine operators must not be lower than the pay established by the MTS for the standard according to the guaranteed minimum. But this leaves many questions unsolved and much depends upon their correct solution.

Miroslav Rositsky [Czechoslovak Republic]

CONCERNING THE NEW FORMS OF INDUSTRIAL AND CONSTRUCTION MANAGEMENT IN THE CZECHOSLOVAK REPUBLIC

The new principles of management were approved by the CC of the Czechoslovak CP in February, 1958, and their realization began after April 1, 1958. The basic element of the new system is the production-economic unit in the form of a concern or an association of concerns. Such units practice the principle of cost control and are responsible for their own activities. Some of them have designing bureaus or even research organizations attached to them. The unit has the form of an enterprise when several similar concerns, as a rule covering the whole branch of production, are merged into one, the biggest of them becoming the nucleus of the new organization. There are two types in this case — one big producer with its smaller subcontractors or several similar producers among which the best becomes the leading concern and the others its branches.

The unit in the form of an association of concerns is formed when the participating concerns are small and dispersed throughout the territory of the republic. In such a case the association becomes the leading organ, planning the development of production and technical reorganization, supply of materials, etc. This form is especially frequently met among food concerns.

Before the reform there were 1,600 industrial concerns in Czechoslovakia; now there are 344 units (276 of them are large units) and 68 associations. All important questions which formerly were decided by the ministries at the center, are now solved on the spot. Ministries were not under the cost control system and so were not sufficiently interested in the results of their own activity.

At the head of the unit is a collective organ — the council of directors of the united concern. This frees ministries from the consideration of details and all their efforts are now concentrated on preparing plans and annual reports, establishing standards, prices, directing technical progress, redistributing accumulations, training the personnel, etc. As a result of the reform the staff of the ministries was reduced 30%. At the center there are now the State Planning Commission and the Economic Council. The first one prepares five-year plans (or longer) and plans of economic collaboration with other socialist countries, and decides questions of industrial location. The Economic Council ensures the carrying out of the annual plans, raising the technical level of the national economy, etc.

The economy works on the basis of perspective plans (10 to 15 years), five-year plans, which determine the basic proportions, the most important directions of the capital construction, the development of the foreign and domestic trade and annual plans which ensure the realization of the five-year plans. The system of indices has been simplified, the number being reduced in production by 20%, in construction by 50% and in the field of labor by 75%. The index of plan fulfillment is now the index of supply which shows what the national economy really needs. In the general plan the capital investments are determined only for the most important objects. The purpose of all these innovations was 1) to simplify reporting, and 2) to develop local initiative.

The system of economic stimuli is now more effectively used: a) the concerns are given a certain portion of the profit and of depreciation charges; b) there is a bonus fund; c) there is an average wage level: if productivity increases, the wage level increases too. Retained profits may be used for capital construction (without approval from above) which result in a maximal reduction of costs and in turn increase profits and bonuses. The concern's part in profits is established for a five-year period. The depreciation fund serves as a replacement fund and the fund of capital construction.

The system of economic stimuli is built in such a way that the higher the depreciation charges, the greater the share of the concern in them. The associations and the ministries watch that the requirements of the law are met. The new system may involve certain difficulties in its realization (growth of circulation means at the expense of capital construction, etc.), but the system of controls and other measures will help to prevent abuses. The new system of management is more elastic and the participation of workers in it is greater.

V. Martynovskaya

CONCERNING THE QUESTION OF RUSSIAN UTOPIAN SOCIALISM OF THE FORTIES

The revolution of July, 1830 in France brought about a
evaluation of liberal ideas among Russian intelligentsia
a turn to socialism. Petrashevsky wrote at that time tha
"socialism is a reaction... against the anarchical destru
tive principles of liberalism."

Socialism of that period was antifeudal and revolutiona
but was not limited to the "peasant socialism" of Herzen
usually it is assumed. Faith in the peculiarity of Russia
life and in the possibility of a peasant socialist revolutio
was characteristic of Herzen. But Belinsky, who also sa
economic slavery in the wage system approached the ph
nomenon of capitalism and the bourgeoisie historically.
the first stage the bourgeoisie struggle with feudalism; a
the second — it is the bourgeoisie triumphant. According
him there was no feudalism in Russia, and in the center
his attention was not a peasant mir, but an agricultural r
gime free from landlord ownership in land — state peasa
He was a republican and did not think that the peasant mi
was an obstacle to the formation of the proletariat. The
next stage in Russia he saw as a period of democratic reforn
and he expected Russian noblemen to become bourgeoisie.

Petrashevsky was defending the ideas of peasant democra
Common ownership of land was an example of common poss
sion characterizing the spread of socialism; but he did not s
in the mir a guarantee of the socialist transformation of Ru
its closeness to socialism. He connects socialism with a ne
organization of labor. Socialism, according to him, is a new
system of social life and the basic question of it was the ques
tion of the organization of labor. Herzen passionately defen
the non-capitalist road of Russia's development, while Petr
shevsky was inclined to recognize the necessity of capitalis
velopment, seeing in capitalism a preliminary stage to soci
ism, and saw in the city layers of the population forces of re
tionary transformation which would lend a political charact
to the people's rebellion against autocracy.

All this shows that Russian utopian socialists differed
many important respects among themselves.

DISCUSSIONS AND DELIBERATIONS

V. Batyrev

CONCERNING THE NECESSITY AND THE NATURE O COMMODITY PRODUCTION UNDER SOCIALISM

Commodity production has greatly developed under so
cialism. Is this not in contradiction with the Marxist tre
ment of commodity production as a historical category?
Some writers think that commodity production is necess
because of the existence of the collective farms (as a fo
of relation between the state and the farms); but this is
true: 1) commodity relations exist between state concer
2) there is no absolute necessity of money relations bet
the state and the collective farms. Other writers believ
that the commodity character of socialist production is
quired by the law of distribution according to labor. Thi
is also wrong. Commodity production makes it possible
express various kinds of concrete labor, qualitatively di
ferent, in terms of abstract social labor. The impossibi

recording qualitatively different kinds of social labor in ural measure — working time — is the result not of these ferences, but of the character of social labor itself in the st phase of communism.

The founders of the scientific communism could not in- stigate the concrete forms of socialist production. Yet en in this field we have certain indications of the neces- y of commodity production during the first phase of com- nism when there is a certain non-antagonistic contradic- n between the principles of communist society and the er-effects of the bourgeois regime in the economic basis d superstructure inherited from capitalism.

The means of production — the property of the whole peo- e — are used by individual concerns. The socialist state ntrols their work. The self-directing market mechanism es not exist anymore; yet work is not yet a vital necessity citizens and material incentives are necessary. Thus mmodity production of a special kind expresses socialist oduction relations. Exchange takes place here between in- vidual links of socialist production, united by social prop- ty in the means of production. This exchange complements e direct planned connections between the links of the social vision of labor under socialism. Under conditions of com- odity production of a special kind exchange has no self- ecting character, does not regulate production, but is ed in a planned way just as other economic categories ought about by it — price, cost, wages, profit, etc., in der to obtain to the fullest realization of the economic vs of socialism. Commodity production in a socialist onomy plays the role of an objectively necessary mecha- sm of social control and stimulates on a material basis e activity of each socialist concern in addition to direct nned guidance and control over production.

On the basis of commodity production such categories of mmodity-money relations emerge as the turnover of the ds of the state concerns, profitable operation, planned stribution of means through the financial and credit sys- ns, banking control by the ruble over production, etc. Ig- ring the requirements of commodity production has a gative influence on production, prevents the lowering of costs, brings about excessive stocks of goods and ma- ials, slows down the turnover of means, etc.

The development of socialist society on the way to com- nism requires the development of commodity-money rela- ns by every means (and not the dying off of commodity oduction and the reduction of the sphere of commodity- ney relations). Strengthening of the direct contractual ations between socialist concerns, increased control to ieve correspondence of the goods produced with the eds of the population, bringing order into the wage sys- n, greater stimulation for the workers in production, the ming reduction of the role the natural economy has played kolkhoz life — all this brings about an expansion of the here of commodity circulation and will bring the second ge of communism closer. The elimination of commodity oduction and commodity-money relations is not on the ler of the day in the foreseeable future.

Venzher

MMODITY PRODUCTION UNDER SOCIALISM AND E COLLECTIVE FARMS

The small farms in the USSR were transformed into large ms through collectivization. Yet from the very first rs of Soviet power state farms also were organized, mainly on the virgin lands. Only 2.5 million ha. of landlords' land were turned into state farms. Now 78,000 collective farms have 390 million ha. and 5,800 state farms 100 million ha. Some economists thought that collective farms should be transformed into state farms. The Communist Party came to the conclusion that this would be a mistake. We should develop kolkhoz property, raising it to the level of national property.

Socialist production is commodity production of a special kind, its development being directly connected with strengthening and expanding commodity-money relations and with the gradual dying away of natural economy relations. Because of social diversity, labor under socialism preserves its dual character and the goods created by labor are exchanged according to the amount of abstract labor embodied in them. That is why all products have a commodity form. Socialist production can be realized only under conditions of comparison and commensurability of the expenditure of labor by individual workers who need the products of concrete labor of other members of society. Such an exchange is based on the principle of equivalence. The commodity-money instrument of measurement of various kinds of concrete labor becomes a common denominator. Socialist production is large-scale commodity production planned on the scale of the whole national economy. Small producers are transformed into large producers through cooperation. Socialist exchange is realized on the basis of the law of value. This law becomes a lever of planned social development.

A collective farm is a large-scale agricultural concern where the degree of collectivization of the means of production is lower than in the state sector. This precludes the possibility of redistribution of income among individual collective farms. Each collective farm is a unit, to a certain degree independent of others. At the same time each collective farm has economic ties with other concerns and branches of the national economy. When the product of labor increases so much that a relatively small part of social labor is sufficient to satisfy all the needs of the national economy for food and agricultural raw materials, then it will become possible to realize the transition to a single form of enterprise so that agricultural production will be based on national property in the means of production. Theoretically we may assume that this may happen relatively soon at the stage of socialism.

The reforms connected with the collective farms (the abolition of the MTS, the sale of machines to the collective farms, more freedom in planning, etc.) create favorable conditions for technical progress in agriculture and the need for interkolkhoz concerns and organizations on a wider base. This must bring about the formation of kolkhoz unions and associations; this is also dictated by the need for planning kolkhoz production and marketing its products.

However it would be wrong to assume that the necessity to create interkolkhoz unions is dictated mainly by the necessity to redistribute a part of the net income created in the kolkhoz sector of agriculture in the interests of the pulling up the lagging collective farms (as presumably suggested by Academician Strumilin). The problem of pulling up the lagging collective farms is a national problem and not an interkolkhoz problem. Its solution is connected with the rise in the productivity of labor of all collective farms (including the lagging ones) and not with the redistribution of a part of the net income of the leading collective farms for the benefit of the lagging ones.

Interkolkhoz associations are necessary first of all for the solution — through common efforts of the collective farms — of those economic tasks which cannot be solved by individual farms. The further development and strengthening of these associations will make it possible in the future to transfer to them the functions of material-technical supply of the collective farms and the repair of their machines, and then also the functions of consumers' associations so that a complex integration of cooperation will take place. All this will constitute one of the conditions for the transition to communist production and distribution.

CRITICISM AND BIBLIOGRAPHY

D. Chernomordik

Problems of Cost in Transport

Review of a book by E. V. Mikhaltsev, The Cost of Railroad Transportation, 1957, 415 pp.

In this work the author classifies factors which influence the cost of transportation. The first group is made up of factors relating to the whole national economy (density of freight and passenger movement, kinds of freight, the distances the freight and passengers are transported, seasonal character of the work, average weight of the load). These factors do not depend upon the railroads. This is very important to keep in mind when we compare the results of the work of various railroads. For example, the railroads of the Baltic republics and Western Ukraine have a very small freight density and this circumstance cannot be changed overnight. Naturally the cost of transportation there is higher than the average for the USSR.

The second group of factors relates to the character of railroad construction — its length, equipment, gauge, grades, types of cars and locomotives, etc. The third group is formed by exploitation factors which depend upon the organization of the technological processes (load per axle, average train weight, commercial speed, percentage of the cars running empty, etc.).

How may one connect these factors with expenses? The nomenclature of railroad expenditures was simplified in 1953 and reduced in 1954, but it still contains thousands of items. The research workers have prepared 12 indices which would simplify this work further (car-axle-km, locomotive-km, ton-km-gross, axle-car-hour, freight train-brigade-hours, locomotive-brigade-hours, man-hours per conductor of passenger cars, switch locomotive-hours, kg. of theoretical fuel, tons shipped, processed shipments and ton-km net and passenger-km.

For determination of numerical dependence of expenditures upon indices and for finding qualitative characteristics needed for the determination of the cost, four methods may be used: 1) direct calculations; 2) standards of expenditures, 3) relative importance of expenditures, 4) coefficient of influence. The first one, according to the author, demands too much time and the results are not as good as those obtained by the new methods. The third one was worked out by the author and he recommends it. Its advantages: 1) no need to calculate expenditure standard per measuring unit; 2) it shows at a glance the factors influencing expenditures and 3) it demands less labor. The method of influence is convenient for the study of the exploitation factors and for carrying out tentative calculations.

The author correctly considers that the depreciation charges should be included in the cost of the product. But they do not reflect the actual wear and tear because they are based upon the balance sheet value of the basic funds which is quite different from the present value. We have determine through inventorization their cost at present prices.

This book, the result of many years of fruitful work, is very useful. Its defects are 1) all calculations are relate to some theoretical railroad and this has certain disadva tages; 2) the method of direct calculations of expenditure should have been more fully treated — it has its place an is highly valued by Orlov and Chudov. It is simpler. The author is unjustified in his negative attitude toward reduc further the number of indices. Chudov would reduce ther only to two — axle-km-car and ton-km-gross. All these questions deserve further discussion.

E. Gnedin

The Legend About the Free Market Economy

Prof. Robert Naumann: Theorie Und Praxis des Neoliber mus. Das Maerchen von der freien oder sozialen Martwi schaft, Berlin, 1957, 411 pp.

R. Naumann is a professor of Humboldt University in lin. His book analyzes the Western German economy, an the theory of neoliberalism which serves as a basis for Western German economic policy as well as the "econon miracle" of Western Germany, attributed to the free ma economy. The Christian Democratic Party, the Free De cratic Party and the right wing of the Social Democratic Party are united on this basis. The Social Democratic P proclaims "freedom of private initiative as the basis anc free competition as an important means of the free economic policy."

The author shows that at least some of the theoreticia of neoliberalism collaborated with the Nazis (Boehm, Ei Micksch). The main feature of today's neoliberalism is hostility to socialism. It replaces an analysis of social nomic formations with a study of two "ideal" models: 1) ideal model of free competition, and 2) an ideal model of centralized economy. Instead of the laws of economic de opment it deals with the "rules of the game" which parti ipants establish as they please. The neoliberals find th the best model is an economy built on free competition.

In reality all this is an attempt to hide the domination the monopolies. Of course, on paper they are against mo lies. But a monopoly for them is an extremely rare phenomenon: they see five forms of market relations: comp tion, partial oligopoly, oligopoly, partial monopoly and, finally, a monopoly when there is only one producer!

The reality of Western Germany shows that concentra of capital has greatly increased and that the federal ent prises serve the interests of the monopolies, selling the their products cheaply (especially power). Low wages, tensification of labor (expressed in more than doubling industrial accidents as compared with 1938), relatively unemployment, the lagging development of agriculture — this shows the kind of miracle we have there.

The economic development of Germany was helped by reconstruction process after the war, post-war trade ex pansion, preparations for a new war, etc. Investments amounted to 19.7% of the national income in 1936 and to 22.26% in the post-war years, as compared with 13% in France and 14.5% in Great Britain. Exports which made 5.2% of the total social product of Western Germany in 1949, rose to 13-4% in 1952 and 15.7% in 1955. The dev ment of Western Germany has an unstable, unhealthy, fe ish character.

According to Prof. Neumann neoliberalism is a current of ictionary bourgeois political economy which is in the rvice of Western Germany and American monopoly mas- s, in the service of warmongers and those who perpetuate division of Germany. Numerous facts show that neo- eralism is an expression of the adjustment on the part of right wing of liberalism to the interests of monopoly capi- under conditions of the sharpening of the general crisis capitalism. The high development of monopoly capitalism quires free competition which is advantageous for the ongest and most influential monopolies: conditions of e competition strengthen their power.

W ECONOMIC LITERATURE

ll books enumerated below are in the Russian language]

. P. M. Alampiev: Liquidation of Economic Inequality nong the Peoples of the Soviet East and the Socialist Geo- aphic Distribution of Industry (based on the historical ex- rience of the Kazakh SSR), 1958, 451 pp.
. Problems of Socialist Reproduction. A collection of arti- s. Institute of Economics, USSR Academy of Science, 58, 415 pp.
. Problems of the Economic Effectiveness of New Tech- ue in Construction. Papers of the Ordzhonikidze Engi- ering-Economic Institute (Moscow), the 9th issue. 1958, 4 pp.
. B. D. Zotov: Foreign Trade of the European People's mocracies in the Service of Socialist Construction. 1958, 5 pp.
I. M. Levin: Planning Labor and Wages in Industrial ncerns. 1958, 191 pp.
S. M. Lisichkin: Essays on the Development of the troleum Industry of the USSR. 1958, 428 pp.
Problems of the Development of Industry and Transport the Yakutia ASSR, 1958, 459 pp.
I. Slepov: Industrialization of Construction and Its Im- tance for the National Economy. 1958, 264 pp.
M. E. Shass: Economics of the USSR Construction In- stry, a textbook for engineering-economic institutes. 58, 439 pp.
Economics and Organization of Livestock Breeding in Collective Farms. 1958, 552 pp.
Economics of Foreign Trade, a textbook. 1958, 392 pp.
Economics of Transport, a textbook for engineers and onomists of the railroad transport institutes. Second re- ed edition, 1958, 711 pp.

CIENTIFIC LIFE

Gradov

The Economic Institute, Ukrainian Academy of Sciences

n 1957 this Institute studied basic questions of the devel- nent of the Ukrainian national economy and questions con- ted with the reform of the management system in indus- and construction. Special attention was given to the nplex development of the Lvov and Stanislav economic- ninistrative regions. Among the problems studied were uestions of socialist reproduction," "The role of finances l credit in socialist reproduction," "The economic effec- eness of new technique and advanced technology."

t was shown that the application of new technique and ad- nced technology as well as of the most rational specialization and cooperation demonstrate great possibilities for the increase of production in machine building. For example, it was shown that the application of more rational methods of exothermic heating of the dead heads of steel ingots would save 4,000 tons of steel and 1.3 million rubles at the "Bolshevik" plant alone.

A group from the Institute studied improvements in the organization and payment of labor in socialist agriculture. Another group studied problems of the complex development of the economy in the Ukraine's western economic regions.

Special local groups were formed for the study of local problems. For example such a group in Stalino studied the coal industry and questions of the organization of labor in the mines and the effectiveness of capital investment in new mine construction. Another group in Kharkov studied the economics of machine building and specialization and cooperation in this branch. A third group in Dnepropetrovsk studied the economics of the metallurgical industries in connection with the reconstruction of the steel and iron plants.

A section on statistics resumed its work in 1957, preparing for the census of the population. It published "Population Censuses in the USSR." Important work has been done in connection with the 40th anniversary of Soviet power in the Ukraine.

In 1958 the Institute studied nine problems: the laws of development of the socialist economy, the law of value and its application in the USSR economy, perspectives of industrial development in the Ukraine, the economic law of payment according to labor and its action in the USSR economy, the improvement in the organization of production and management in Ukrainian industry, the law of uninterrupted growth of labor productivity and its action in USSR agriculture, questions of the complex development of the Ukrainian economic regions, the history of the national economy and economic thought in the Ukraine, and economics of capitalist countries.

P. Persits

Economic Research in the Field of Subsidiary Chemistry

The May decision of the CC, CPSU, on the development of the chemical industry signifies a new stage in the development of chemistry in the USSR. It also opens unlimited possibilities for the development of so-called "subsidiary chemistry." Subsidiary chemistry concerns supplement the main chemical industry, widely using wastes and less valuable kinds of raw materials. This makes it possible for the main chemical industry to solve important problems of chemical development and for the subsidiary chemical concerns to satisfy various needs of the population for chemical products. Many of them can greatly increase their production without substantial capital investments.

Questions of subsidiary chemistry are studied by the Chemical Research Institute of Local Industry, under the RSFSR State Planning Commission. This body aims at raising the technical level of the chemical industry, expanding its raw material base and improving technical-economic performance. For example, the utilization of used films which formerly were burnt yields per ton about 900 kg of colloxylin and 80 kg. of plasticizer. Rubber mixtures with increased content of regenerator save a large amount of synthetic rubber. Wastes from its production can be used for the production of consumption goods etc., etc. All this would save millions of rubles and free the USSR from importing expensive products.

The May decisions bring a radical change into interbranch ties and material balances of raw materials and ready products. The Institute should now study problems of rational geographic distribution of concerns, their mergers and cooperation, and the expansion of the raw materials' base.

Scientific Conference Concerning the Problem How to Determine the Economic Effectiveness of Agricultural Production

At the Conference organized by the Economic Research Institute of the USSR State Planning Commission and the Institute of Economics, USSR Academy of Sciences, many scientists and practical workers were present and the following papers were discussed:

1. K. P. Obolensky: Basic Principles and Indices of the Economic Effectiveness of Agricultural Production and Their Application at the Present Stage.
2. K. P. Eremeyev: Calculations of the Expenditures of Labor in Agricultural Production.
3. E. N. Valyuzhenich: Calculations of the Cost of Agricultural Products.
4. C. A. Zaremba: Determination of the Rentability of Agricultural Production.
5. B. A. Trudolyubov: Determination of Agricultural Production per 100 ha. of Land.
6. N. G. Karotamm: Economic Effectiveness of Capital Investments in Socialist Agriculture.
7. M. I. Kozlov: Questions of Costs of Field Cultures.
8. S. I. Semyonov: Methods of Calculating the Cost of Livestock Products in the Collective Farms.
9. N. N. Germanovich: Economic Effectiveness of Agri tural Production on the Smolensk Collective Farms.
10. N. A. Kostelensky: Economic Effectiveness of Veget Production in the USSR Regions.
11. S. I. Kutikov: Questions of Methodology for Determi the Effectivenss of Livestock Production.
12. T. I. Arefyev: Economic Effectiveness of Production of Sugar Beets in USSR Regions.
13. P. F. Dubrov: Economic Effectiveness of Free Prod tion in RSFSR Regions.
14. T. A. Kaval: Economic Effectiveness of Grain Produ tion in USSR Regions.

The conference showed that all participants generally the same views on the indices of economic effectiveness methods of their formation.

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